

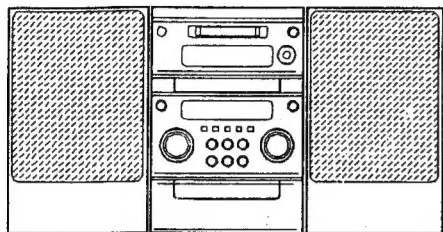
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AIWA -02467



XR-MD50



MD/CD STEREO SYSTEM

- BASIC TAPE MECHANISM : 6ZM-1 AR2
- BASIC CD MECHANISM : 3ZG-3 YA3N
- BASIC MD MECHANISM : 6ZG-5 A

• TYPE : U, EZ

SYSTEM	CD - CASSEIVER	SPEAKER	REMOTE CONTROLLER
XR-MD50	CX-SLMD50	SX-SLM50	RC UNIT, 6AS19

SERVICE MANUAL

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G- -	
G- -	
G- -	

アイワ株式会社
AIWA CO., LTD.

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Tokyo Japan

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SPECIFICATIONS

<FM Tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity(IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<AM / MW Tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 uV/m
Antenna	Loop antenna

<LW Tuner section>(EZ)

Tuning range	144 kHz to 290 kHz
Usable sensitivity	1400 uV/m
Antenna	Loop antenna

<Amplifier section>

Power output	U : 25 watts per channel, Min. RMS at 6 ohms, from 60 Hz to 15 kHz, with no more than 1% Total Harmonic Distortion EZ : Rated : 25W + 25W (6 ohms, T.H.D. 1%, 1 kHz/DIN 45500) Reference : 30W + 30W (6 ohms, T.H.D. 10%, 1 kHz/DIN 45324) DIN MUSIC POWER 38W + 38W
Total harmonic distortion (U)	0.1% (18 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX : 400 mV
Outputs	SUPER WOOFER: 1.9 V SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo minijack) : accepts headphones of 16 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	CrO ₂ tape: 50 Hz - 16000 Hz Normal tape: 50 Hz - 15000 Hz
Signal-to noise ratio	60 dB (Dolby B NR ON, CrO ₂ tape peak level)
Recording system	AC bias
Heads	Deck : Recording/Playback/ erase head x 1

<Compact disc player section>

Laser	Semiconductor laser ($\lambda = 780$ nm)
D-A converter	1 bit dual
Signal-to-noise ratio	88 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<MD recorder section>

Scanning method	Non-contact optical scanner (Semiconductor laser application)
Recording system	Magnetic polarity modulation overwrite system
Rotation speed	Approx. 400 - 900 rpm (CLV)
Sampling frequency	44.1 kHz
No. of channels	Stereo: 2 channels Monaural: 1 channel
A-D, D-A converter	1 bit
Frequency	20 ~ 20000 Hz +0.5 ~ -1.5 dB
Wow and flutter	Unmeasurable

<Speaker system SX-LM50>


Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer : 130 mm (5 ¹ / ₈ in.) cone type Tweeter : 25 mm (1 in.) cone type
Impedance	6 ohms
Output sound pressure level	86 dB/W/m
Dimensions (W x H x D)	200 x 307 x 235mm (7 ⁷ / ₈ x 12 ¹ / ₈ x 9 ³ / ₈ in.)
Weight	4.2 kg (9 lbs 4 oz.)

<General> (EZ)

Power requirements	230 V AC, 50 Hz
Power consumption	150 W
Dimensions of main unit (W x H x D)	200 x 307 x 347.5 mm
Weight of main unit	7.5 kg

<General> (U)

Power requirements	120 V AC, 60 Hz
Power consumption	70 W
Dimensions of main unit (W x H x D)	200 x 307 x 347.5 mm (7 ⁷ / ₈ x 12 ¹ / ₈ x 13 ³ / ₄ in.)
Weight of main unit	7.5 kg (16 lbs 9 oz.)

- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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- The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc.
Under license from BBE Sound, Inc.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

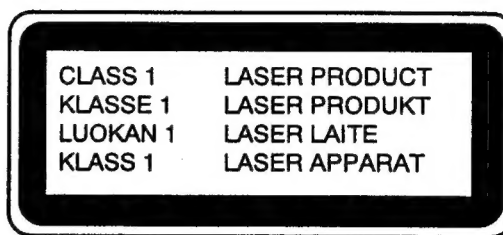
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.



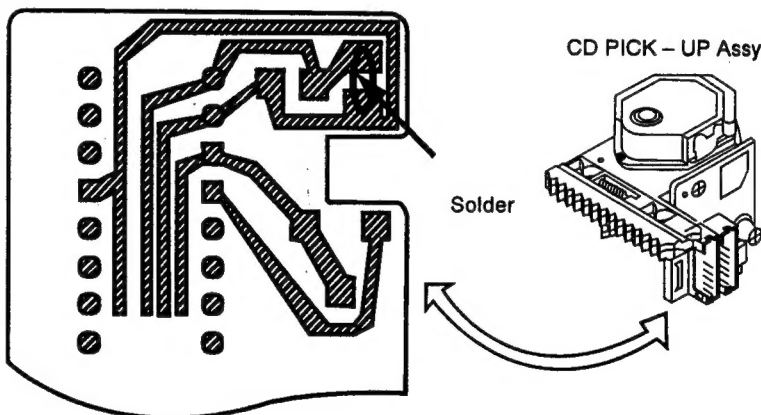
Precaution to replace Optical block

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use the clothes do not touch the diode.

- 1) After the connection, remove solder shown in figure right.

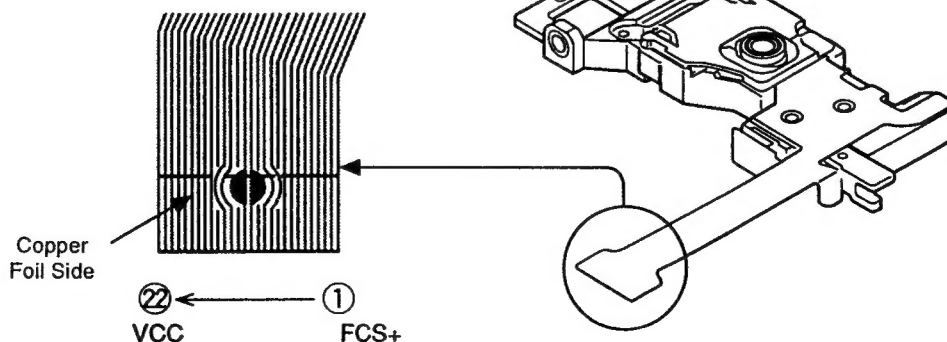
(KSS-212A)

PICK - UP Assy P.C.B.



(KMS-194C)

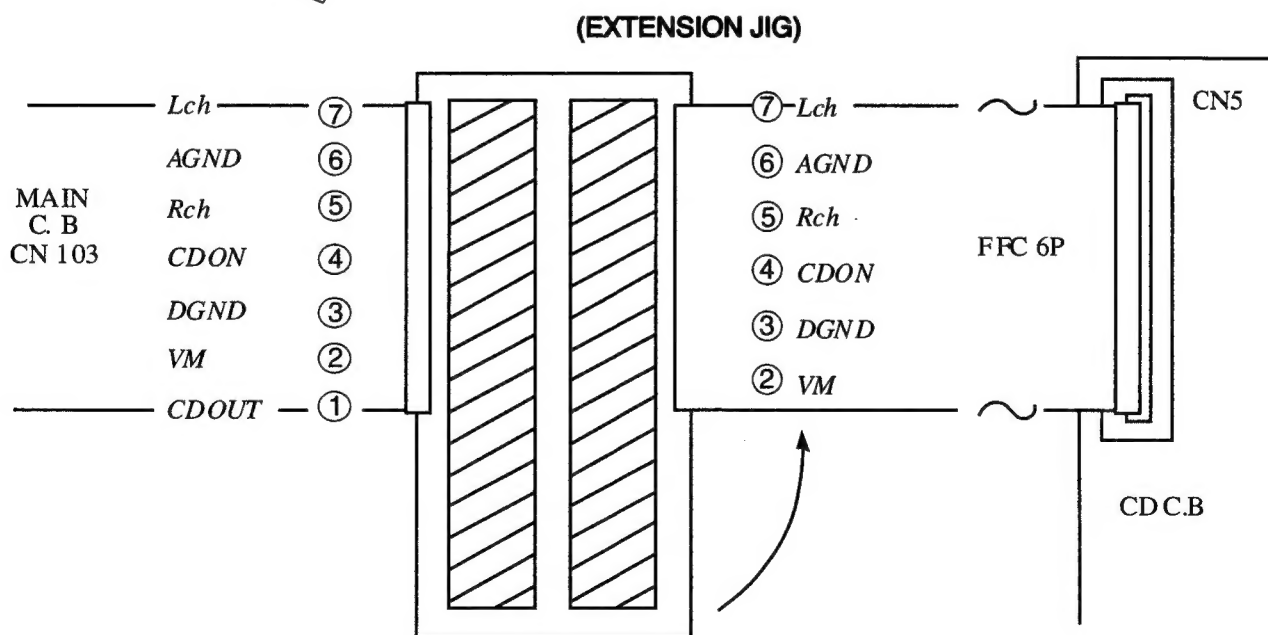
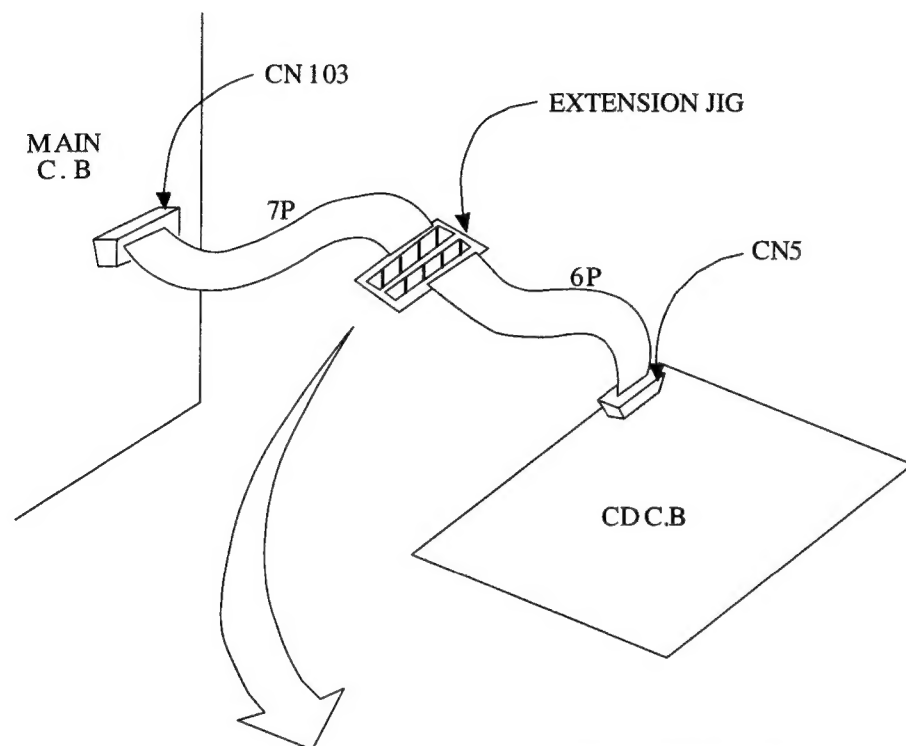
PICK - UP Assy P.C.B.



SERVICE JIG AND TOOLS

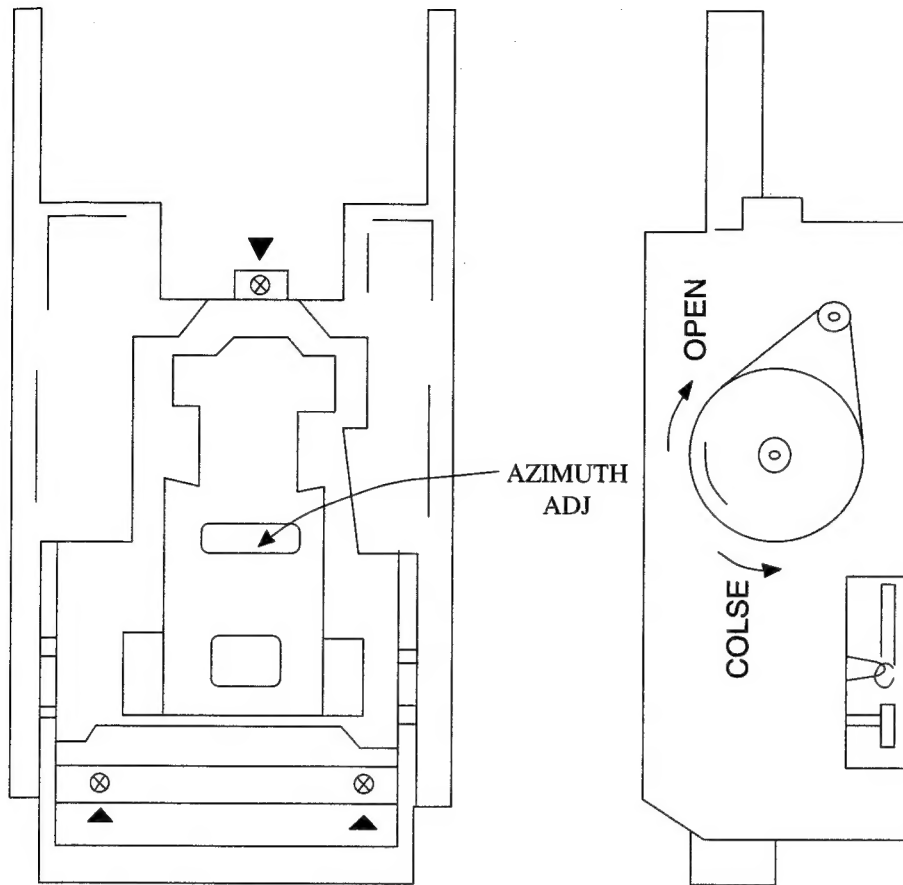
NAME	PARTS NO.
FFC EXTENSION JIG KIT	SV - J00 - 010 - 010
FFC 6P - 1.25	84 - CF3 - 663 - 010

HOW TO ASSEMBLE THE JIGS



Insert the flat cable aligning the upper part of flat cables.

CASSETTE MECHANISM DISASSEMBLY INSTRUCTIONS



- Remove three screws (VT3-5) pointed ▲ marks in the illustration. Next, open the cassette tray half, and pull the main unit up. Close the cassette tray when taking out the main unit.
- Azimuth adjustment is able to perform from the hole located top side of the unit as illustration shown.
- Adjust motor speed with screwdriver from the hole located bottom surface of amplifier chassis.
- Operate open / close tray of cassette deck manually after removing CD C.B.

MD DISASSEMBLY INSTRUCTIONS

● How to remove the cabinet.

1. Remove the MD main unit.

- 1) Remove four screws (VT3-5) as indicated by ▲. (See Fig. 1)

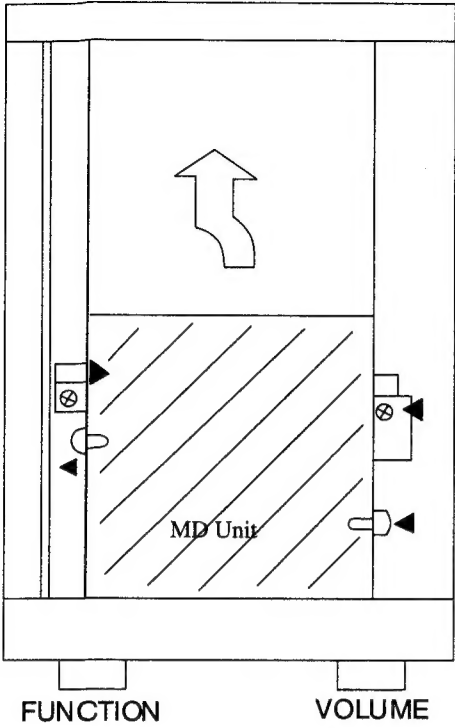


Fig. 1

(Top view)

- 2) Remove the MD main unit to the arrow direction.
3) Remove four screws of the upper sealed case of the MD main unit.

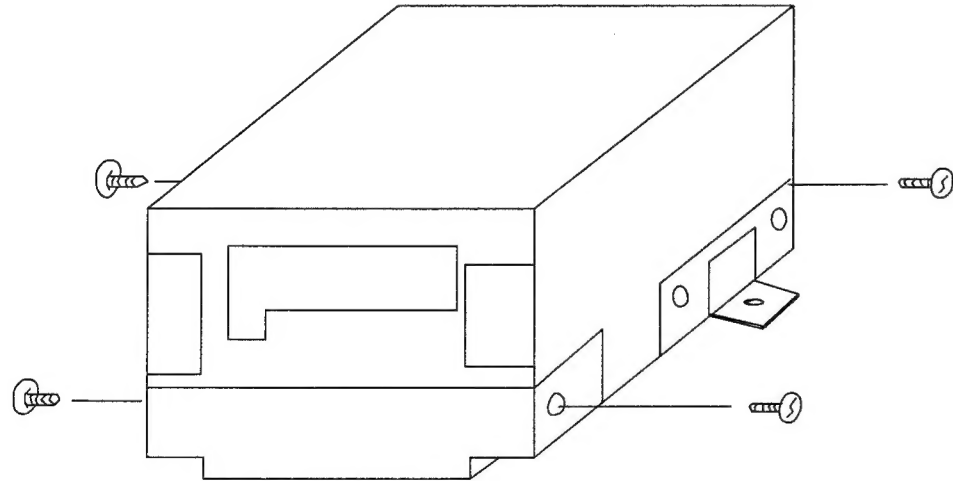


Fig. 2

2. Removal of the HLDR,MD

- 1) Remove the four screws (S-SCREW) and springs.
Remove the HLDR, MD.

Note: This MD mechanism makes use of three types of springs. Be careful when assembling the HLDR, MD.

- Spring ① : Black, 10 rolls
Spring ② : Silver, 11 rolls
Spring ③ : Green, 9 rolls

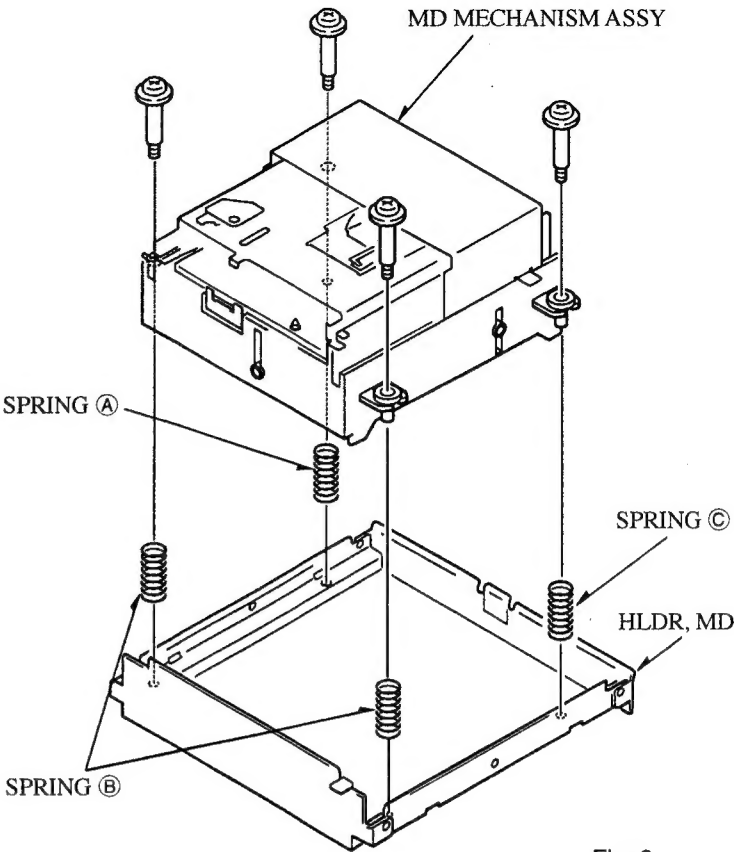


Fig. 3

3. Removal of the HOLD, RACK

- 1) Remove the six screws (VT2+1.7-6), and then remove the HOLD, RACK.

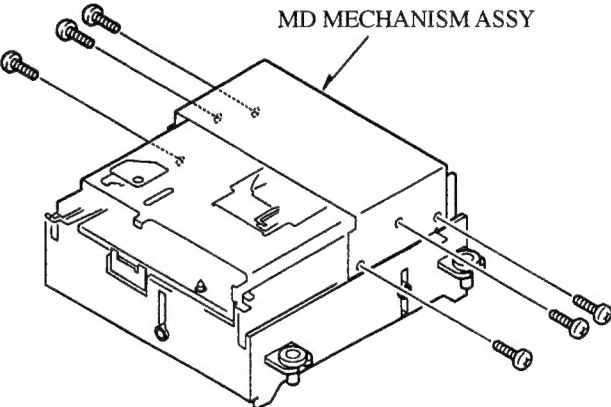


Fig. 4

4. Removal of the CHAS, LOADING ASSEMBLY

- 1) Rotate the GEAR, RELAY in the direction of the arrow, and move the RACK, LOADING to the EJECT position.
- 2) Fit the CHAS, LOADING ASSEMBLY's boss into the RACK, LOADING L's notch. Perform the same operation for RACK, LOADING G, R.

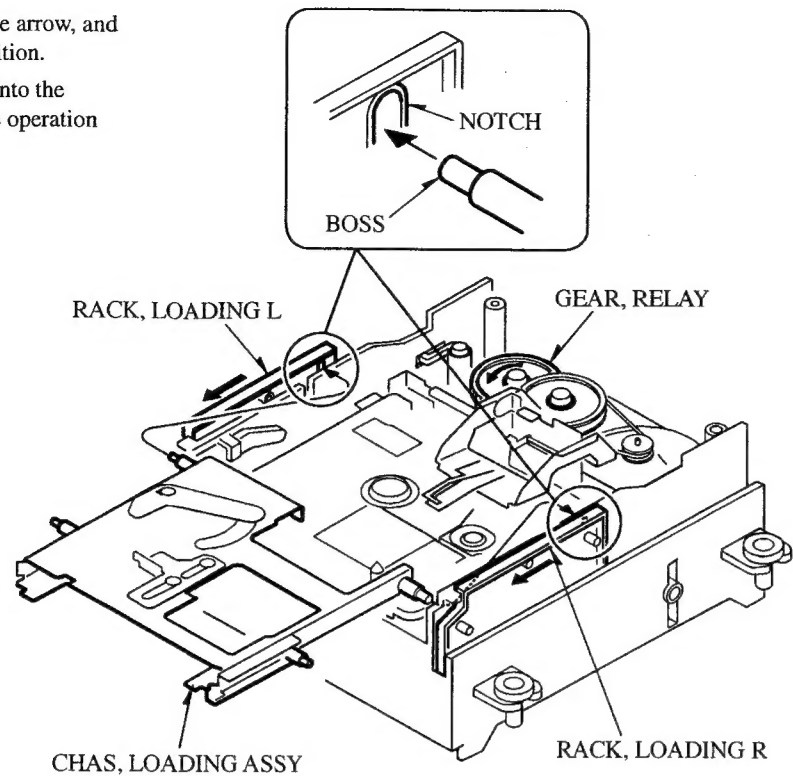


Fig. 5

Note: Be certain to perform operations after verifying that the OWH (overwrite head) is sufficiently raised. If the OWH is lowered, the CHAS, LOADING ASSEMBLY will catch onto the OWH, causing it to bend.

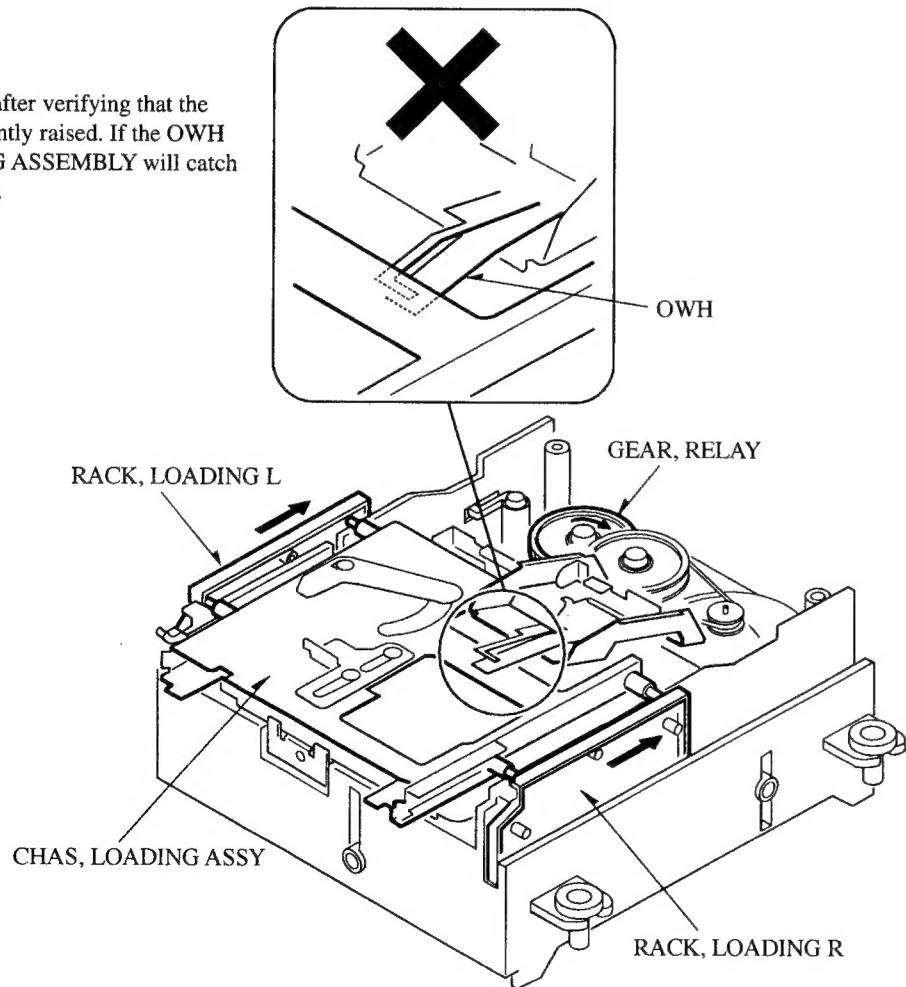


Fig. 6

5. Removal of the MD mechanism

- 1) Remove the two (A) screws and one (B) screw, and then remove the MD mechanism.
- 2) Remove the SPR-T, LVR LOADING L, R and the LEVER, LOADING.

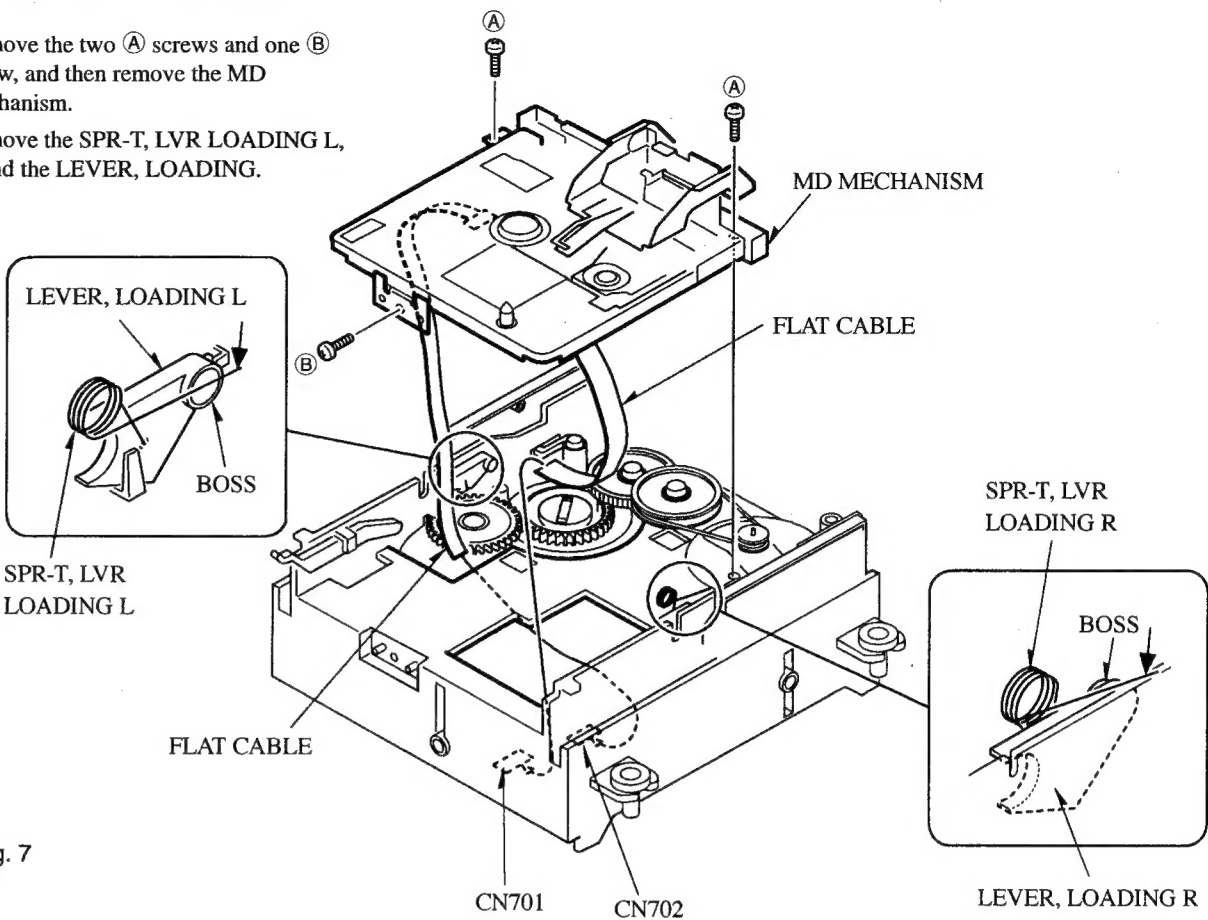
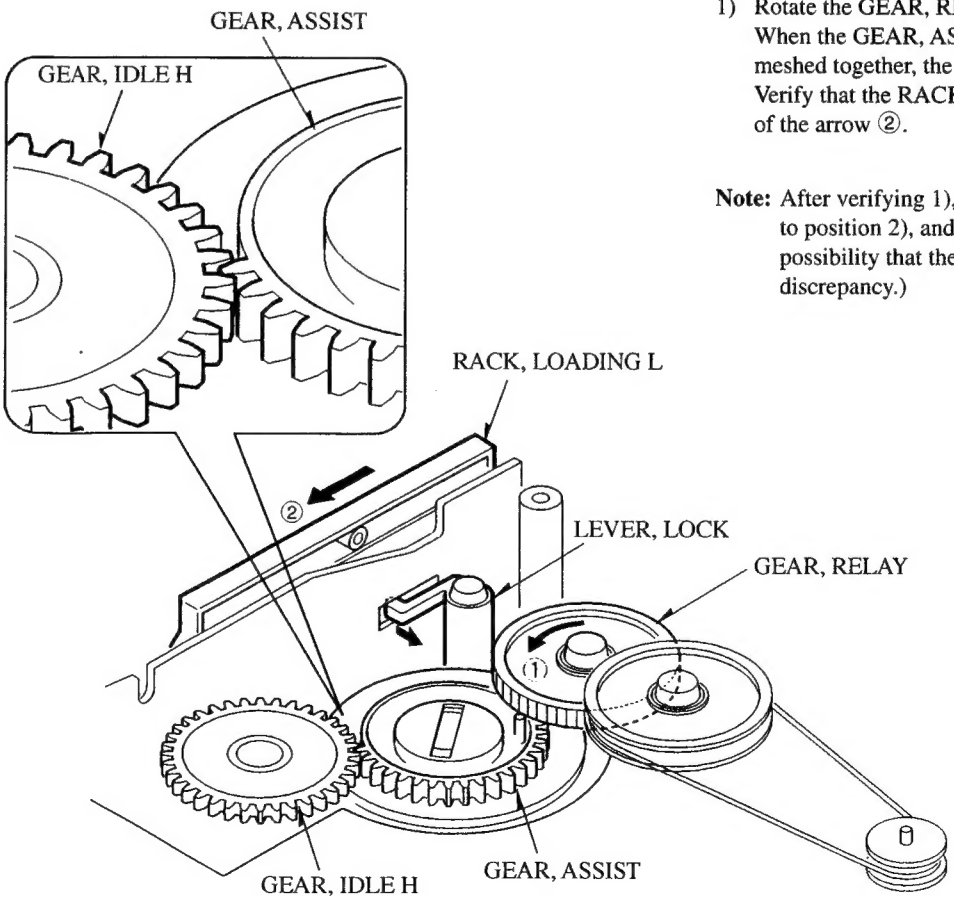


Fig. 7

6. Gear and lever positions



- 1) Rotate the GEAR, RELAY in the direction of the arrow ①. When the GEAR, ASSIST and the GEAR IDLE H have meshed together, the lock of the LEVER, LOCK is cancelled. Verify that the RACK, LOADING L moves in the direction of the arrow ②.

Note: After verifying 1), be certain to return each gear and lever to position 2), and install the MD mechanism. (There is a possibility that the gears may cause a topographical discrepancy.)

Fig. 8

- 2) When the GEAR, ASSIST's boss is in the position shown in the figure, the RACK, LOADING L is in the loading end position and the LEVER LOCK is locking the RACK, LOADING L.

Note: If the GEAR, ASSIST's boss deviates from the center in the direction of the arrow, it is not possible to perform EJECT. After verifying, be certain to return each gear and lever to the positions shown in the figure, and install the MD mechanism. (There is a possibility that the gears may cause a topographical discrepancy.)

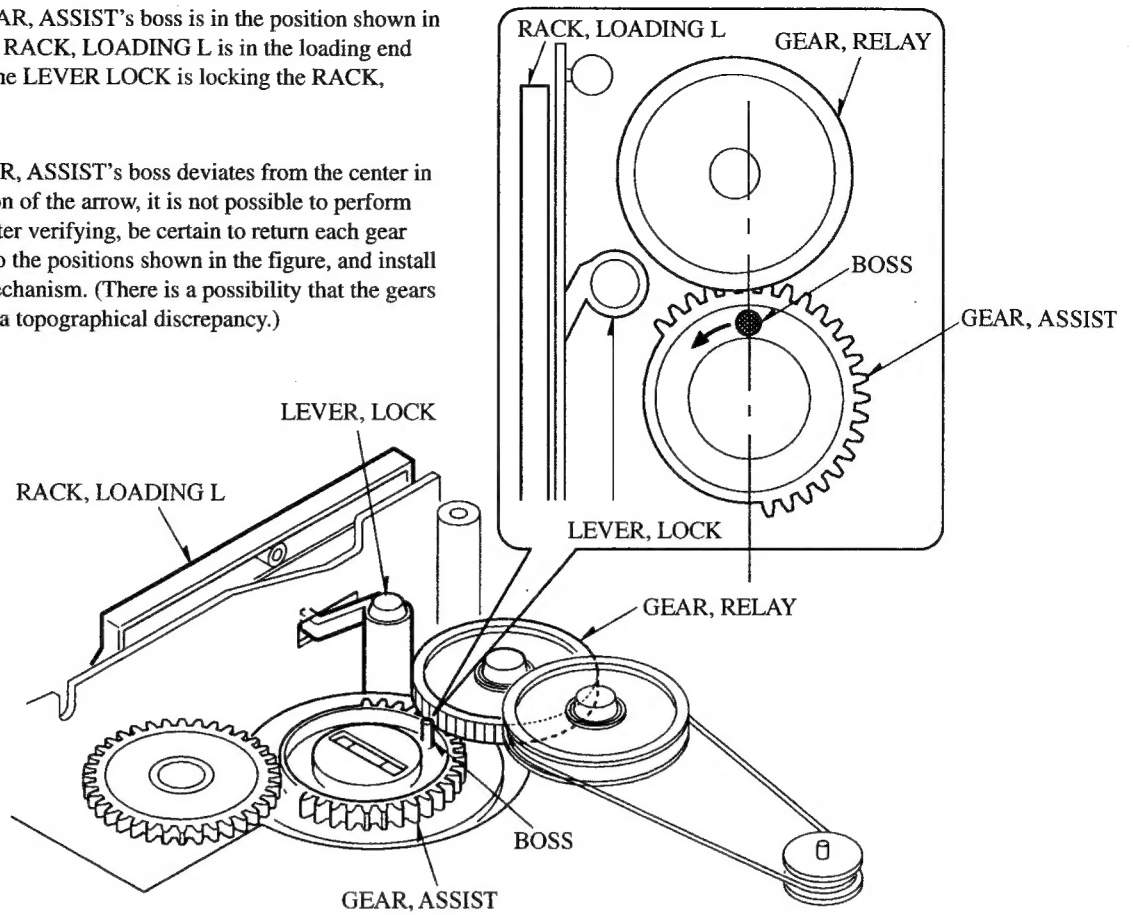


Fig. 9

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF.NO.	PART NO.	KANRI NO.	DESCRIPTION	REF.NO.	PART NO.	KANRI NO.	DESCRIPTION
IC							
	87-A20-186-010	IC, LA9240M		87-026-214-080	TR, DTA114YS		
	87-A20-187-010	IC, LC78622E		87-026-213-080	C-TR, DTC114YK<EZ>		
	87-A20-157-010	IC, TA2092N		89-327-143-080	C-TR, 2SC27140		
	87-001-536-010	IC, NJM78M05FA		87-026-227-080	C-TR, DTA114EK		
	87-001-982-010	IC, TA7291S		89-505-434-540	C-FET, 2SK543-TB(4/5)		
	87-020-903-010	IC, NJM7805FA		87-026-423-080	C-TR, RN2305		
	87-CE1-621-010	IC, LC866432V-5D27<U>		89-341-165-080	C-TR, 2SC4116GR		
	87-CE1-661-010	IC, LC866448W-5E62<EZ>		89-115-884-080	C-TR, 2SA1588Y		
	87-A20-458-010	IC, STK-405-050R		89-112-134-080	C-TR, 2SA1213YZ1		
	87-017-738-010	IC, NJM2068LD		87-A30-056-080	C-FET, 2SJ278		
	87-002-727-010	IC, NJM4558L		87-A30-057-080	C-FET, 2SK1764		
	87-001-874-010	IC, HA12134A		89-420-053-010	TR, 2SD2005R		
	87-001-607-080	C-IC, NJM4558M		87-026-269-080	TR, DTA114ES<EZ>		
	87-070-282-010	IC, BU2092		87-421-141-280	C-TR, 2SD2114KU<EZ>		
	87-027-666-010	IC, TC4052BP		87-026-486-080	TR, DTA144TS<EZ>		
	87-017-915-080	IC, BU4094BCF	DIODE				
	87-A20-056-010	IC, BA3880S		87-020-465-080	DIODE, 1SS133		
	87-070-337-010	IC, BH3854S		87-A40-115-060	DIODE, RS603M		
	87-A20-442-040	C-IC, TC74HC07AF		87-070-274-080	DIODE, 1N4003 SEM		
	87-070-127-110	IC, LC72131D		87-020-027-080	C-DIODE, 1SS184		
	87-017-714-110	IC, LA1836L		87-017-174-080	ZENER, HZS11A3L		
	87-070-246-010	IC, GPIU271X		87-017-147-080	ZENER, HZS33-2		
	87-CC1-615-010	IC, M38198MC-094FP		87-017-091-080	ZENER, HZS5C1		
	87-001-551-080	C-IC, TC7S08F		87-001-731-080	ZENER, HZS6C2L		
	87-001-585-080	C-IC, TC7S32F		87-020-125-080	C-DIODE, 1SS181		
	87-001-982-010	IC, TA7291S		87-001-559-080	DIODE, 1SS131		
	87-A20-014-010	C-IC, CXA1981Q/AR		87-017-164-080	ZENER, HZS9A2L		
	87-A20-397-010	C-IC, CXD2535CR		87-020-465-080	DIODE, 1SS133		
	87-A20-398-010	C-IC, CXD2536R		87-017-076-080	ZENER, HZS3C3		
	87-017-920-040	C-IC, HM51V4400		87-A40-197-080	ZENER, UZL6L1		
	86-CD0-601-010	C-IC, CXP81952		87-A40-256-080	DIODE, RB441Q-40<U>		
	87-A20-496-040	C-IC, MPC17A38ZVEL		87-017-850-080	C-DIODE, DAP222		
	87-017-360-080	C-IC, SC7S04F		87-A40-124-080	C-DIODE, RB501V-40		
	87-002-465-080	C-IC, TC74HC368AF		87-020-575-080	C-ZENER, 02C22.4Z		
	87-A20-401-040	C-IC, AK4504VF		87-017-948-080	C-DIODE, U1FMJ44N		
	87-017-945-040	C-IC, NJM2112		87-002-419-080	C-DIODE, U1BC44		
	87-001-792-080	C-IC, NJM2100M		87-020-465-080	DIODE, 1SS133		
	87-017-984-080	C-IC, TK11230					
	84-HM1-622-040	IC, CXA8027N	MAIN C.B				
	87-020-454-010	IC, DN6851		87-033-220-010	PIN DIAI COATING		
△	87-001-196-010	ICP-N10<U>		C101	87-010-399-090	CAP,E 3300-35 M SME	
	87-A20-440-040	IC, BU1920FS<EZ>		C102	87-010-399-090	CAP,E 3300-35 M SME	
TRANSISTOR				C103	87-010-196-080	C-CAP, S 0.1-25 Z F	
	87-026-463-080	TR, 2SA933SRS		C104	87-010-196-080	C-CAP, S 0.1-25 Z F	
	87-026-297-080	C-TR, DTA144TK		C105	87-010-196-080	C-CAP, S 0.1-25 Z F	
	87-026-239-080	C-TR, DTC114TK		C106	87-010-196-080	C-CAP, S 0.1-25 Z F	
	89-109-521-080	TR, 2SA952K		C107	87-010-453-090	CAP, E 4700-25 M SME	
	89-318-155-080	TR, 2SC1815GR		C108	87-010-196-080	C-CAP, S 0.1-25 Z F	
	89-213-702-010	TR, 2SB1370E		C109	87-010-196-080	C-CAP, S 0.1-25 Z F	
	87-026-610-080	TR, KTC3198GR		C110	87-010-196-080	C-CAP, S 0.1-25 Z F	
	87-026-609-080	TR, KTA1266GR		C111	87-010-196-080	C-CAP, S 0.1-25 Z F	
	89-332-665-080	TR, 2SC3266GR<EZ>		C112	87-012-140-080	C-CAP, S 470P-50 J CH	
	89-327-125-080	C-TR, 2SC2712GR		C113	87-010-235-080	CAP, E 470-16 SME	
	89-327-124-080	C-TR, 2SC2712Y		C114	87-010-235-080	CAP, E 470-16 SME	
	87-A30-047-080	TR, CSD655E		C115	87-010-403-080	CAP, E 3.3-50 M SME	
	89-502-465-080	FET, 2SK246GR		C116	87-010-384-080	CAP, E 100-25 M SME	
	87-026-210-080	C-TR, DTC144EK		C117	87-010-384-080	CAP, E 100-25 M SME	
	87-026-211-080	C-TR, DTA144EK		C118	87-010-764-080	CAP, E 47-63 M VX	
	89-232-654-080	C-TR, 2SC3265Y		C119	87-010-263-080	CAP, E 100-10 SME	
	89-320-011-080	TR, 2SC2001K		C120	87-010-940-090	CAP, E 0.01F-16N M SME	
	87-026-226-080	C-TR, DTA143EK		C121	87-015-997-090	CAP, E 2200-16 M SME	
	89-111-625-080	C-TR, 2SA1162GR		C122	87-010-403-080	CAP, E 3.3-50 M SME	
	87-026-238-080	C-TR, DTC144WK		C180	87-015-785-080	C-CAP, 0.1-25 ZF	
	89-112-965-080	TR, 2SA1296GR		C185	87-010-197-080	C-CAP, S 0.01-25 KB	
	87-026-228-080	C-TR, DTA124EK		C186	87-015-819-080	C-CAP, 0.01-50 KB	
	87-026-233-080	C-TR, DTA114TK		C187	87-018-134-080	CAP, TC U 0.01-16 NY UP050<EZ>	
				C188	87-010-197-080	C-CAP, S 0.01-25 KB<EZ>	

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C189	87-010-197-080		C-CAP,S 0.01-25 KB<EZ>	C390	87-010-196-080		C-CAP,S 0.1-25 Z F
C190	87-010-197-080		C-CAP,S 0.01-25 KB<EZ>	C391	87-010-184-080		C-CAP,S 3300P-50 K B
C191	87-010-197-080		C-CAP,S 0.01-25 KB<EZ>	C398	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C193	87-018-134-080		CAP,TC U 0.01-16 NY UP050<U>	C399	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C194	87-012-157-080		C-CAP,S 330P-50 J CH GRM<EZ>	C401	87-016-081-080		C-CAP,S 0.1-16 KR
C195	87-012-157-080		C-CAP,S 330P-50 J CH GRM<EZ>	C402	87-016-081-080		C-CAP,S 0.1-16 KR
C197	87-018-115-080		C-CAP,TC U 47P-CH<EZ>	C403	87-012-155-080		C-CAP,S 180P-50 J CH GRM
C198	87-018-115-080		C-CAP,TC U 47P-CH<EZ>	C404	87-012-155-080		C-CAP,S 180P-50 J CH GRM
C201	87-010-402-080		CAP,E 2.2-50 M SME	C405	87-012-142-080		C-CAP,S 0.33-16 Z F
C202	87-010-402-080		CAP,E 2.2-50 M SME	C406	87-012-142-080		C-CAP,S 0.33-16 Z F
C203	87-010-405-080		CAP,E 10-50 M SME	C407	87-012-349-080		C-CAP,S 1000P-50 J CH
C204	87-010-405-080		CAP,E 10-50 M SME	C408	87-012-349-080		C-CAP,S 1000P-50 J CH
C205	87-010-149-080		C-CAP,S 5P-50 CH	C409	87-010-545-080		CAP,E 0.22-50 M SME
C206	87-010-149-080		C-CAP,S 5P-50 CH	C410	87-010-545-080		CAP,E 0.22-50 M SME
C207	87-010-195-080		C-CAP,S 0.068-25 K F	C412	87-010-371-080		CAP,E 470-6.3 M SME
C208	87-010-195-080		C-CAP,S 0.068-25 K F	C413	87-016-081-080		C-CAP,S 0.1-16 KR
C209	87-010-195-080		C-CAP,S 0.068-25 K F	C501	87-010-404-080		CAP,E 4.7-50 M SME
C210	87-010-195-080		C-CAP,S 0.068-25 K F	C502	87-010-404-080		CAP,E 4.7-50 M SME
C211	87-018-205-080		CAP,TC U 0.022-25 Z F TP	C503	87-010-318-080		C-CAP,S 47P-50 J CH
C215	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>	C504	87-010-318-080		C-CAP,S 47P-50 J CH
C216	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>	C505	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C217	87-010-247-080		CAP,E 100-50 M SME	C506	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C231	87-010-404-080		CAP,E 4.7-50 M SME	C509	87-010-405-080		CAP,E 10-50 M SME
C232	87-010-404-080		CAP,E 4.7-50 M SME	C510	87-010-405-080		CAP,E 10-50 M SME
C233	87-010-176-080		C-CAP,S 680P-50 J SL	C511	87-010-381-080		CAP,E 330-16 SME
C234	87-010-176-080		C-CAP,S 680P-50 J SL	C540	87-010-196-080		C-CAP,S 0.1-25 Z F
C235	87-012-140-080		C-CAP,S 470P-50 J CH	C541	87-010-196-080		C-CAP,S 0.1-25 Z F
C236	87-012-140-080		C-CAP,S 470P-50 J CH	C542	87-010-405-080		CAP,E 10-50 M SME
C237	87-010-544-080		CAP,E 0.1-50 M SME	C543	87-010-546-080		CAP,E 0.33-50 SME
C238	87-010-544-080		CAP,E 0.1-50 M SME	C544	87-010-546-080		CAP,E 0.33-50 SME
C301	87-012-154-080		C-CAP,S 150P-50 J CH GRM	C547	87-015-883-080		C-CAP,S 0.022-25 K B<U>
C302	87-012-154-080		C-CAP,S 150P-50 J CH GRM	C547	87-010-213-080		C-CAP,S 0.015-25 K B<EZ>
C303	87-012-156-080		C-CAP,S 220P-50 J CH GRM	C548	87-015-883-080		C-CAP,S 0.022-25 K B<U>
C304	87-012-156-080		C-CAP,S 220P-50 J CH GRM	C548	87-010-213-080		C-CAP,S 0.015-25 K B<EZ>
C305	87-010-189-080		C-CAP,S 8200P-50 K B	C551	87-010-177-080		C-CAP,S 820P-50 J SL
C306	87-010-189-080		C-CAP,S 8200P-50 K B	C552	87-010-177-080		C-CAP,S 820P-50 J SL
C307	87-010-189-080		C-CAP,S 8200P-50 K B	C553	87-010-178-080		C-CAP,S 1000P-50 K B
C308	87-010-189-080		C-CAP,S 8200P-50 K B	C554	87-010-178-080		C-CAP,S 1000P-50 K B
C309	87-010-197-080		C-CAP,S 0.01-25 K B	C555	87-010-805-080		C-CAP,S 1-16 Z F
C311	87-010-197-080		C-CAP,S 0.01-25 K B	C556	87-010-805-080		C-CAP,S 1-16 Z F
C313	87-012-154-080		C-CAP,S 150P-50 J CH GRM	C557	87-010-405-080		CAP,E 10-50 M SME
C314	87-012-154-080		C-CAP,S 150P-50 J CH GRM	C558	87-010-405-080		CAP,E 10-50 M SME
C321	87-010-196-080		C-CAP,S 0.1-25 Z F	C559	87-010-805-080		CAP,S 1-16 Z F
C333	87-012-349-080		C-CAP,S 1000P-50 J CH	C560	87-010-805-080		CAP,S 1-16 Z F
C334	87-012-349-080		C-CAP,S 1000P-50 J CH<EZ>	C583	87-012-153-080		C-CAP,S 120P-50 CH
C335	87-010-197-080		C-CAP,S 0.01-25 K B	C584	87-012-156-080		C-CAP,S 220P-50 J CH GRM
C336	87-010-260-080		CAP,E 47-25 SME	C585	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C337	87-010-183-080		C-CAP,S 2700P-50 K B	C586	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C338	87-010-183-080		C-CAP,S 2700P-50 K B	C587	87-010-381-080		CAP,E 330-16 SME
C339	87-010-183-080		C-CAP,S 2700P-50 K B	C591	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C341	87-012-156-080		C-CAP,S 220P-50 J CH GRM	C592	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C342	87-012-156-080		C-CAP,S 220P-50 J CH GRM	C593	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C351	87-010-402-080		CAP,E 2.2-50 M SME	C594	87-010-318-080		C-CAP,S 47P-50 J CH<EZ>
C352	87-010-402-080		CAP,E 2.2-50 M SME	C595	87-010-196-080		C-CAP,S 0.1-25 Z F
C353	87-012-154-080		C-CAP,S 150P-50 J CH GRM	C596	87-010-178-080		C-CAP,S 1000P-50 K B
C354	87-012-154-080		C-CAP,S 150P-50 J CH GRM	C600	87-010-553-040		CAP,E 47-16 GAS
C355	87-010-182-080		C-CAP,S 2200P-50 K B	C601	87-010-178-080		C-CAP,S 1000P-50 K B
C356	87-010-182-080		C-CAP,S 2200P-50 K B	C602	87-010-178-080		C-CAP,S 1000P-50 KB
C357	87-010-197-080		C-CAP,S 0.01-25 K B	C603	87-010-405-080		CAP,E 10-50 M SME
C358	87-010-197-080		C-CAP,S 0.01-25 K B	C604	87-010-405-080		CAP,E 10-50 M SME
C359	87-010-189-080		C-CAP,S 8200P-50 K B	C605	87-010-260-080		CAP,E 47-25 SME
C360	87-010-189-080		C-CAP,S 8200P-50 K B	C606	87-010-101-080		CAP,E 220-16 SME
C361	87-010-184-080		C-CAP,S 3300P-50 K B	C607	87-010-188-080		C-CAP,S 6800P-50 K B
C362	87-010-184-080		C-CAP,S 3300P-50 K B	C608	87-010-188-080		C-CAP,S 6800P-50 K B
C363	87-010-401-080		CAP,E 1-50 M SME	C609	87-018-127-080		CAP,TC U 470P-50 K B UP050
C364	87-010-401-080		CAP,E 1-50 M SME	C610	87-018-127-080		CAP,TC U 470P-50 K B UP050
C385	87-010-196-080		C-CAP,S 0.1-25 Z F	C611	87-010-197-080		C-CAP,S 0.01-25 K B
C386	87-010-318-080		C-CAP,S 47P-50 J CH	C612	87-010-197-080		C-CAP,S 0.01-25 K B
C387	87-010-197-080		C-CAP,S 0.01-25 K B	C613	87-010-195-080		C-CAP,S 0.068-25 K F
C389	87-010-402-080		CAP,E 2.2-50 M SME	C614	87-010-195-080		C-CAP,S 0.068-25 K F

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C615	87-010-404-080	CAP,E 4.7-50 M SME		C823	87-010-197-080	C-CAP,S 0.01-25 K B	
C616	87-010-404-080	CAP,E 4.7-50 M SME		C828	87-010-197-080	C-CAP,S 0.01-25 K B	
C617	87-010-404-080	CAP,E 4.7-50 M SME		C829	87-010-197-080	C-CAP,S 0.01-25 K B	
C618	87-010-404-080	CAP,E 4.7-50 M SME		C830	87-015-819-080	C-CAP,0.01-50 K B	
C631	87-010-404-080	CAP,E 4.7-50 M SME		C835	87-010-197-080	C-CAP,S 0.01-25 K B	
C632	87-010-404-080	CAP,E 4.7-50 M SME		C860	87-010-248-080	CAP,E 220-10 SME<EZ>	
C633	87-010-260-080	CAP,E 47-25 SME		C861	87-010-196-080	C-CAP,S 0.1-25 ZF<EZ>	
C634	87-016-081-080	C-CAP,S 0.1-16 KR		C862	87-010-182-080	C-CAP,S 2200P-50 K B<EZ>	
C635	87-016-081-080	C-CAP,S 0.1-16 KR		C863	87-010-178-080	C-CAP,S 1000P-50 KB<EZ>	
C636	87-016-081-080	C-CAP,S 0.1-16 KR		C864	87-010-315-080	C-CAP,S 27P-50 J CH<EZ>	
C637	87-016-081-080	C-CAP,S 0.1-16 KR		C865	87-010-315-080	C-CAP,S 27P-50 J CH<EZ>	
C638	87-010-176-080	C-CAP,S 680P-50 J SL		C866	87-010-197-080	C-CAP,S 0.01-25 KR<EZ>	
C639	87-010-176-080	C-CAP,S 680P-50 J SL		C867	87-012-145-080	C-CAP,S 270P-50 J CH<EZ>	
C640	87-010-403-080	CAP,E 3.3-50 M SME		C868	87-010-405-080	CAP,E 10-50 M SME<EZ>	
C641	87-010-403-080	CAP,E 3.3-50 M SME		C872	87-010-197-080	C-CAP,S 0.01-25 K B<EZ>	
C642	87-010-248-080	CAP,E 220-10 SME		C901	87-010-197-080	C-CAP,S 0.01-25 K B	
C643	87-010-403-080	CAP,E 3.3-50 M SME		C902	87-015-785-080	C-CAP, 0.1-25 Z F	
C644	87-012-141-080	C-CAP,S 0.22-16 Z F		C903	87-018-119-080	CAP,TC U 100P-50 K B UP050	
C645	87-015-883-080	C-CAP,0.022-25 K B		C942	87-010-154-080	C-CAP,S 10P-50 D CH<EZ>	
C646	87-010-382-080	CAP,E 22-25 M SME		C946	87-010-401-080	CAP,E 1-50 M SME	
C647	87-010-263-080	CAP,E 100-10 SME		C949	87-014-049-080	CAP,PP 470P-100 J<EZ>	
C670	87-010-404-080	CAP,E 4.7-50 M SME		C952	87-010-197-080	C-CAP,S 0.01-25 K B<EZ>	
C671	87-010-404-080	CAP,E 4.7-50 M SME		C957	87-010-315-080	C-CAP,S 27P-50 J CH<EZ>	
C701	87-010-381-080	CAP,E 330-16 SME		C958	87-010-197-080	C-CAP,S 0.01-25 K B<EZ>	
C702	87-010-404-080	CAP,E 4.7-50 M SME		C960	87-010-196-080	C-CAP,S 0.1-25 Z F	
C703	87-010-197-080	C-CAP,S 0.01-25 K B		C961	87-010-152-080	C-CAP,S 8P-50 D CH<U>	
C704	87-010-197-080	C-CAP,S 0.01-25 K B		C987	87-018-134-080	CAP,TC U 0.01-16 N Y UP050	
C711	87-010-263-080	CAP,E 100-10 SME		C990	87-010-197-080	C-CAP,S 0.01-25 K B	
C712	87-010-196-080	C-CAP,S 0.1-25 Z F		C993	87-018-134-080	CAP,TC U 0.01-16 N Y UP050	
C722	87-010-152-080	C-CAP,S 8P-50 D CH		C995	87-010-197-080	C-CAP,S 0.01-25 K B	
C723	87-010-178-080	C-CAP,S 1000P-50 K B		C999	87-010-196-080	C-CAP,S 0.1-25 Z F	
C725	87-010-178-080	C-CAP,S 1000P-50 K B		CF801	87-008-261-010	FLTR,CFSFE10.7MA5<U>	
C727	87-010-196-080	C-CAP,S 0.1-25 Z F		CF801	87-008-423-080	FLTR,SFE10.7S3GH-A-TF21<EZ>	
C728	87-010-248-080	CAP,E 220-10 SME		CF802	87-008-261-010	FLTR,CFSFE10.7MA5<U>	
C735	87-018-134-080	CAP,TC U 0.01-16 N Y UP050		CF802	82-785-747-080	CF,MS2 GHY,R<EZ>	
C770	87-010-405-080	CAP,E 10-50 M SME		FC103	88-907-151-110	FF-CABLE,7P 1.25 150MM	
C771	87-010-405-080	CAP,E 10-50 M SME		FB125	87-008-372-080	FLTR,EMIBL01 RN1<U>	
C772	87-010-194-080	C-CAP,S 0.047-25 Z F		FB127	87-008-372-080	FLTR,EMIBL01 RN1<U>	
C773	87-010-196-080	C-CAP,S 0.1-25 Z F		FC104	87-CE1-633-010	FF-CABLE,14P -1.0 400MM	
C774	87-010-263-080	CAP,E 100-10 SME		FFE801	A8-6ZA-194-030	6ZA-1 YFEUNM<U>	
C775	87-010-405-080	CAP,E 10-50 M SME		FFE801	A8-6ZA-195-030	6ZA-1 YFEENM<EZ>	
C776	87-010-197-080	C-CAP,S 0.01-25 K B		J201	87-009-216-010	JACK,3.5 BLK ST W/SW	
C777	87-010-400-080	CAP,E 0.47-50 M SME		J202	87-099-801-010	JACK,PIN 1P BLK W/O SW	
C778	87-010-401-080	CAP,E 1-50 M SME		J203	87-A60-238-010	TERMINAL,SP 4P (MSC)	
C779	87-010-401-080	CAP,E 1-50 M SME		J501	80-MT3-616-010	JACK,PIN 2P (*)	
C780	87-010-197-080	C-CAP,S 0.01-25 K B		J801	87-A60-202-010	TERMINAL,ANT 4P MSP-154V-02<U>	
C781	87-010-405-080	CAP,E 10-50 M SME		J801	87-033-241-010	TERMINAL,ANT 2P AJ-2039<EZ>	
C782	87-010-405-080	CAP,E 10-50 M SME<U>		L101	87-003-383-010	COIL,1UH K<EZ>	
C782	87-010-197-080	C-CAP,S 0.01-25 KR<EZ>		L102	87-003-383-010	COIL,1UH K<EZ>	
C785	87-010-197-080	C-CAP,S 0.01-25 K B		L211	87-003-143-080	COIL,4.7UH K LAL02<U>	
C787	87-010-184-080	C-CAP,S 3300P-50 K B		L212	87-003-143-080	COIL,4.7UH K LAL02<U>	
C788	87-010-184-080	C-CAP,S 3300P-50 K B		L310	87-003-143-080	COIL,4.7UH K LAL02<U>	
C789	87-010-179-080	C-CAP,S 1200P-50 K B		L331	87-007-342-010	COIL,OSC 85KHZ BIAS	
C790	87-010-179-080	C-CAP,S 1200P-50 K B		L351	82-231-622-080	COIL,22MH J TL08	
C791	87-010-401-080	CAP,E 1-50 M SME		L352	82-231-622-080	COIL,22MH J TL08	
C792	87-010-180-080	C-CAP,S 1500P-50 K B<U>		L353	87-003-131-080	COIL,10MH J EL0607	
C792	87-010-182-080	C-CAP,S 2200P-50 K B<EZ>		L354	87-003-131-080	COIL,10MH J EL0607	
C793	87-010-189-080	C-CAP,S 8200P-50 K B		L701	87-A50-027-010	COIL,1 POLE MPX(TOK)	
C794	87-010-408-080	CAP,E 47-50 SME		L702	87-A50-027-010	COIL,1 POLE MPX(TOK)	
C795	87-010-194-080	C-CAP,S 0.047-25 Z F		L721	87-003-102-080	COIL,10UH K LAL02<EZ>	
C796	87-010-403-080	CAP,E 3.3-50 M SME		L741	87-A50-015-010	COIL,FM DET (TOK)	
C802	87-010-197-080	C-CAP,S 0.01-25 K B		L742	87-A90-051-010	FLTR, CFAZ-450 (TOK)	
C803	87-018-134-080	CAP,TC-U 0.01-16 NY UP050		L743	87-005-564-080	C-COIL,2125 2.2UH	
C814	87-010-196-080	C-CAP,S 0.1-25 Z F		L770	87-003-102-080	COIL,10UH K LAL02	
C815	87-018-134-080	CAP,TC-U 0.01-16 NY UP050<U>		L832	87-005-847-080	COIL,2.2UH K CECS	
C817	87-010-197-080	C-CAP,S 0.01-25 K B<EZ>		L941	87-A50-020-010	COIL,ANT LW(COI) 252KHZ<EZ>	
C818	87-010-197-080	C-CAP,S 0.01-25 K B<EZ>		L942	87-A50-019-010	COIL,OSC LW(COI) 856KHZ<EZ>	
C819	87-010-197-080	C-CAP,S 0.01-25 K B<U>		L850	87-005-847-080	COIL,2.2UH K CECS<EZ>	
C820	87-010-408-080	CAP,E 47-50 SME		L981	86-NF4-665-010	COIL,AM PACK 1(TOK)	
C821	87-010-197-080	C-CAP,S 0.01-25 K B		PN101	87-064-122-010	HLDR,WIRE 2.5-10P	

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
PR143	87-026-681-080		PROTECTOR,5A 491 SERIES 60V<EZ>	SW308	87-A90-095-080		SW,TACT EVQ11G04M
PR146	87-026-681-080		PROTECTOR,5A 491 SERIES 60V<EZ>	SW309	87-A90-095-080		SW,TACT EVQ11G04M
R121	87-022-050-080		RES,M/F 0.22-1W J	SW310	87-A90-095-080		SW,TACT EVQ11G04M
R122	87-022-050-080		RES,M/F 0.22-1W J	SW311	87-A90-095-080		SW,TACT EVQ11G04M
SFR301	87-024-168-080		SFR,1K H RH0638C	SW312	87-A90-095-080		SW,TACT EVQ11G04M
SFR302	87-024-168-080		SFR,1K H RH0638C	SW313	87-A90-095-080		SW,TACT EVQ11G04M
SFR331	87-024-175-080		SFR,47K H RH0638C	SW314	87-A90-095-080		SW,TACT EVQ11G04M
SFR332	87-024-175-080		SFR,47K H RH0638C	SW315	87-A90-095-080		SW,TACT EVQ11G04M
SFR351	87-024-168-080		SFR,1K H RH0638C	SW316	87-A90-095-080		SW,TACT EVQ11G04M
SFR352	87-024-168-080		SFR,1K H RH0638C	SW331	87-A90-348-010		SW,RTRY 1-2-24 EVQVEMF0324B
SFR722	87-024-352-080		SFR,4.7K H EVN DJAA03	SW332	87-A90-348-010		SW,RTRY 1-2-24 EVQVEMF0324B
TC701	87-011-253-080		TRIMMER,CER 30P 4.0X4.5 ECRLA				
TC942	87-011-221-080		TRIMMER,CER 30P 6.15X5.9 VCT51<EZ>				
VR651	87-A90-153-010		VR,RTRY 50KBX2 V				
W101	87-CE1-632-010		F-CABLE,10P -2.5 PT				
X703	84-508-618-010		VIB,CER CSB 456 F15				
X721	87-030-372-010		VIB,XTAL 7.200MHZ CSA-309				
X850	89-KT1-608-010		X,TAL 4.332MHZ<EZ>				
FRONT-SYS C.B							
C201	87-010-196-080		C-CAP,S 0.1-25 Z F	C891	87-010-178-080		C-CAP,S 1000P-50 K B
C202	87-012-145-080		C-CAP,S 270-50 CH	C892	87-010-320-080		C-CAP,S 68P-50 CH
C203	87-010-196-080		C-CAP,S 0.1-25 Z F	C893	87-010-196-080		C-CAP,S 0.1-25 Z F
C204	87-010-312-080		C-CAP,S 15P-50 J CH	C894	87-010-405-080		CAP,E 10-50 M SME
C205	87-015-785-080		C-CAP, 0.1-25 ZF	C896	87-010-178-080		C-CAP,S 1000P-50 K B
C222	87-010-178-080		C-CAP,S 1000P-50 K B	C897	87-010-315-080		C-CAP,S 27P-50 J CH
C241	87-010-401-080		CAP,E 1-50 M SME	C898	87-010-197-080		C-CAP,S 0.01-25 KB
C242	87-010-370-080		CAP,E 330-6.3 M SME	C902	87-010-197-080		C-CAP,S 0.01-25 K B
C243	87-010-196-080		C-CAP,S 0.1-25 Z F	C903	87-010-405-080		CAP,E 10-50 M SME
C244	87-010-401-080		CAP,E 1-50 M SME	C904	87-A10-189-040		CAP,E 220-10 M
C245	87-010-550-040		CAP,E 100-6.3 5L SRE	C905	87-A10-189-040		CAP,E 220-10 M
C256	87-010-404-080		CAP,E 4.7-50 M SME	C906	87-A10-189-040		CAP,E 220-10 M
C257	87-010-404-080		CAP,E 4.7-50 M SME	C909	87-010-405-080		CAP,E 10-50 M SME
C258	87-010-392-080		CAP,E 33-35 M SME	C910	87-012-140-080		C-CAP,S 470P-50 J CH
C331	87-012-154-080		C-CAP,S 150P-50 J CH GRM	C911	87-012-140-080		C-CAP,S 470P-50 J CH
C332	87-012-154-080		C-CAP,S 150P-50 J CH GRM	C912	87-012-140-080		C-CAP,S 470P-50 J CH
C333	87-012-154-080		C-CAP,S 150P-50 J CH GRM	C913	87-012-140-080		C-CAP,S 470P-50 J CH
C334	87-012-154-080		C-CAP,S 150P-50 J CH GRM	C914	87-012-140-080		C-CAP,S 470P-50 J CH
C451	87-010-112-080		CAP,E 100-16 M SME	C915	87-012-140-080		C-CAP,S 470P-50 J CH
C452	87-010-197-080		C-CAP,S 0.01-25 K B	C916	87-012-140-080		C-CAP,S 470P-50 J CH
C501	87-010-197-080		C-CAP,S 0.01-25 K B	C917	87-012-140-080		C-CAP,S 470P-50 J CH
C531	87-010-178-080		C-CAP,S 1000P-50 K B	C918	87-012-140-080		C-CAP,S 470P-50 J CH
C601	87-010-197-080		C-CAP,S 0.01-25 K B<EZ>	C919	87-012-140-080		C-CAP,S 470P-50 J CH
C602	87-010-178-080		C-CAP,S 1000P-50 K B<EZ>	C920	87-012-140-080		C-CAP,S 470P-50 J CH
CN451	88-802-092-020		CONN ASSY,9P RED	C921	87-012-140-080		C-CAP,S 470P-50 J CH
FC401	88-909-381-110		FF-CABLE,9P 1.25	C922	87-012-140-080		C-CAP,S 470P-50 J CH
FC452	88-904-331-110		FF-CABLE,4P 1.25 330MM	C923	87-012-140-080		C-CAP,S 470P-50 J CH
FL101	87-CE3-601-010		FL,BJ508GK<U>	C924	87-012-140-080		C-CAP,S 470P-50 J CH
FL101	87-CE3-603-010		FL,BJ544GK<EZ>	C925	87-012-140-080		C-CAP,S 470P-50 J CH
L201	87-A50-052-010		COIL,CLOCK 5.76MHZ T1	C926	87-010-322-080		C-CAP,S 100P-50 J CH
L211	87-003-142-080		COIL,3.3UH K LALOL	C927	87-010-322-080		C-CAP,S 100P-50 J CH
LED501	87-A40-276-080		LED,SML1816W UMB/GRN	C928	87-010-322-080		C-CAP,S 100P-50 J CH
LED503	87-A40-276-080		LED,SML1816W UMB/GRN	C929	87-010-322-080		C-CAP,S 100P-50 J CH
LED505	87-A40-276-080		LED,SML1816W UMB/GRN	C930	87-010-178-080		C-CAP,S 1000P-50 K B
LED507	87-A40-276-080		LED,SML1816W UMB/GRN	C931	87-010-178-080		C-CAP,S 1000P-50 K B
LED509	87-A40-276-080		LED,SML1816W UMB/GRN	C932	87-010-197-080		C-CAP,S 0.01-25 K B
LED511	87-001-161-080		LED,SEL2410E GRN	C933	87-010-196-080		C-CAP,S 0.1-25 Z F
LED512	87-001-161-080		LED,SEL2410E GRN	C934	87-010-196-080		C-CAP,S 0.1-25 Z F
LED513	87-001-161-080		LED,SEL2410E GRN	FC101	87-CE1-640-010		FF-CABLE,16P -1.0 250MM
LED514	87-001-161-080		LED,SEL2410E GRN	FC102	87-CE1-634-010		FF-CABLE,16P -1.0 320MM
LED515	87-001-161-080		LED,SEL2410E GRN	FL901	87-CC1-608-010		FL,CM1532C
LED516	87-002-738-080		LED,SEL2210R-TP6 RED	L901	87-003-149-080		COIL,47UH K LAL02
SW301	87-A90-095-080		SW,TACT EVQ11G04M	SW891	87-A90-095-080		SW,TACT EVQ11G04M
SW302	87-A90-095-080		SW,TACT EVQ11G04M	SW892	87-A90-095-080		SW,TACT EVQ11G04M
SW303	87-A90-095-080		SW,TACT EVQ11G04M	SW893	87-A90-095-080		SW,TACT EVQ11G04M
SW304	87-A90-095-080		SW,TACT EVQ11G04M	SW901	87-CC1-607-010		SW,RTRY 1-2-24 PUSH
SW305	87-A90-095-080		SW,TACT EVQ11G04M	SW902	87-A90-095-080		SW,TACT EVQ11G04M
SW306	87-A90-095-080		SW,TACT EVQ11G04M	SW903	87-A90-095-080		SW,TACT EVQ11G04M
SW307	87-A90-095-080		SW,TACT EVQ11G04M	SW911	87-A90-095-080		SW,TACT EVQ11G04M
SW308	87-A90-095-080		SW,TACT EVQ11G04M	X901	87-008-497-080		VIB,CER 7.68MHZ CST MTW
SW309	87-A90-095-080		SW,TACT EVQ11G04M				
SW310	87-A90-095-080		SW,TACT EVQ11G04M				
SW311	87-A90-095-080		SW,TACT EVQ11G04M				
SW312	87-A90-095-080		SW,TACT EVQ11G04M				
SW313	87-A90-095-080		SW,TACT EVQ11G04M				
SW314	87-A90-095-080		SW,TACT EVQ11G04M				
SW315	87-A90-095-080		SW,TACT EVQ11G04M				
SW316	87-A90-095-080		SW,TACT EVQ11G04M				
SW331	87-A90-348-010		SW,RTRY 1-2-24 EVQVEMF0324B				
SW332	87-A90-348-010		SW,RTRY 1-2-24 EVQVEMF0324B				
FRONT-MD C.B							
C891	87-010-178-080		C-CAP,S 1000P-50 K B				
C892	87-010-320-080		C-CAP,S 68P-50 CH				
C893	87-010-196-080		C-CAP,S 0.1-25 Z F				
C894	87-010-405-080		CAP,E 10-50 M SME				
C896	87-010-178-080		C-CAP,S 1000P-50 K B				
C897	87-010-315-080		C-CAP,S 27P-50 J CH				
C898	87-010-197-080		C-CAP,S 0.01-25 KB				
C902	87-010-197-080		C-CAP,S 0.01-25 K B				
C903	87-010-405-080		CAP,E 10-50 M SME				
C904	87-A10-189-040		CAP,E 220-10 M				
C905	87-A10-189-040		CAP,E 220-10 M				
C906	87-A10-189-040		CAP,E 220-10 M				
C909	87-010-405-080		CAP,E 10-50 M SME				
C910	87-012-140-080		C-CAP,S 470P-50 J CH				
C911	87-012-140-080		C-CAP,S 470P-50 J CH				
C912	87-012-140-080		C-CAP,S 470P-50 J CH				
C913	87-012-140-080		C-CAP,S 470P-50 J CH				
C914	87-012-140-080		C-CAP,S 470P-50 J CH				
C915	87-012-140-080		C-CAP,S 470P-50 J CH				
C916	87-012-140-080		C-CAP,S 470P-50 J CH				
C917	87-012-140-080		C-CAP,S 470P-50 J CH				
C918	87-012-140-080		C-CAP,S 470P-50 J CH				
C919	87-012-140-080		C-CAP,S 470P-50 J CH				
C920	87-012-140-080		C-CAP,S 470P-50 J CH				
C921	87-012-140-080		C-CAP,S 470P-50 J CH				
C922	87-012-140-080		C-CAP,S 470P-50 J CH				
C923	87-012-140-080		C-CAP,S 470P-50 J CH				
C924	87-012-140-080		C-CAP,S 470P-50 J CH				
C925	87-012-140-080		C-CAP,S 470P-50 J CH				
C926	87-010-322-080		C-CAP,S 100P-50 J CH				
C927	87-010-322-080		C-CAP,S 100P-50 J CH				
C928	87-010-322-080		C-CAP,S 100P-50 J CH				
C929	87-010-322-080		C-CAP,S 100P-50 J CH				
C930	87-010-178-080		C-CAP,S 1000P-50 K B				
C931	87-010-178-080		C-CAP,S 1000P-50 K B				
C932	87-010-197-080		C-CAP,S 0.01-25 K B				
C933	87-010-196-080		C-CAP,S 0.1-25 Z F				
C934	87-010-196-080		C-CAP,S 0.1-25 Z F				
FC101	87-CE1-640-010		FF-CABLE,16P -1.0 250MM				
FC102	87-CE1-634-010		FF-CABLE,16P -1.0 320MM				
FL901	87-CC1-608-010		FL,CM1532C				
L901	87-003-149-080		COIL,47UH K LAL02				
SW891	87-A90-095-080		SW,TACT EVQ11G04M				
SW892	87-A90-095-080		SW,TACT EVQ11G04M				
SW893	87-A90-095-080		SW,TACT EVQ11G04M				
SW901	87-CC1-607-010		SW,RTRY 1-2-24 PUSH				
SW902	87-A90-095-080		SW,TACT EVQ11G04M				
SW903	87-A90-095-080		SW,TACT EVQ11G04M				
SW911	87-A90-095-080		SW,TACT EVQ11G04M				
X901	87-008-497-080		VIB,CER 7.68MHZ CST MTW				
CD C.B							
C1	87-033-220-010		PIN,DIAL COATING				
C2	87-010-197-080		CAP,E 3.3-50 M SME				
C2	87-010-197-080		C-CAP,S 0.01-25 K B				

REF.NO.	PART NO.	KANRI NO.	DESCRIPTION	REF.NO.	PART NO.	KANRI NO.	DESCRIPTION
C3	87-010-263-080		CAP,E 100-10 SME	CN2	88-802-081-220		CONN ASSY,8P
C4	87-010-248-080		CAP,E 220-10 SME	CN3	88-802-063-030		CONN ASSY,6P CDME
C5	87-010-197-080		C-CAP,S 0.01-25 K B	CN6	88-802-053-040		CONN ASSY,5P CD TRY
C6	87-010-374-080		CAP,E 47-10 M SME	L1	87-003-102-080		COIL,10UH K LAL02
C7	87-012-349-080		C-CAP,S 1000P-50 J CH	X1	87-030-270-080		VIB,XTAL 16.9344MHZ HC-49/U03
C8	87-010-198-080		C-CAP,S 0.022-25 K B				
C9	87-010-263-080		CAP,E 100-10 SME	PT1 C.B			
C10	87-010-263-080		CAP,E 100-10 SME				
C12	87-010-401-080		CAP,E 1-50 M SME	△	82-304-743-010		TERMINAL,1P
C13	87-010-197-080		C-CAP,S 0.01-25 K B	△	CF101	87-A90-160-080	FUSE CLAMP,FC 51F
				△	CF102	87-A90-160-080	FUSE CLAMP,FC 51F
C14	87-010-405-080		CAP,E 10-50 M SME	△	F101	87-035-484-010	FUSE,1.6A 125V T 237<U>
C16	87-010-545-080		CAP,E 0.22-50 M SME	△	F101	87-035-413-010	FUSE,1.6A 250V T 239<EZ>
C17	87-012-157-080		C-CAP,S 330P-50 J CH GRM				
C18	87-010-213-080		C-CAP,S 0.015-25 K B	△	PT101	87-CE1-639-010	PT,U<U>
C20	87-010-193-080		C-CAP,S 0.033-25 K F	△	PT101	87-CE1-636-010	PT,E<EZ>
				△	R199	88-140-225-080	RES,2.2M-1/2W<U>
C22	87-010-180-080		C-CAP,S 1500P-50 K B				
C23	87-010-194-080		C-CAP,S 0.047-25 Z F	PT2 C.B			
C29	87-010-186-080		C-CAP,S 4700P-50 K B				
C30	87-012-156-080		C-CAP,S 220P-50 J CH GRM				
C31	87-010-545-080		CAP,E 0.22-50 M SME				
				△	C192	87-018-134-080	CAP,TC U 0.01-16 NY UP050<EZ>
C32	87-010-374-080		CAP,E 47-10 M SME	△	CF121	87-033-213-080	FUSE CLAMP,PFC5000<EZ>
C33	87-010-401-080		CAP,E 1-50 M SME	△	CF122	87-033-213-080	FUSE CLAMP,PFC5000<EZ>
C34	87-010-184-080		C-CAP,S 3300P-50 K B	△	F201	87-035-192-010	FUSE,4A 250V T 218<EZ>
C35	87-010-197-080		C-CAP,S 0.01-25 K B		PN102	87-064-122-010	HLDR,WIRE 2.5P-10P
C36	87-010-374-080		CAP,E 47-10 M SME	△	PR101	87-A90-113-080	PROTECTOR,4A 251<U>
				△	PR101	87-A90-094-080	PROTECTOR,4A 491 SERUES<EZ>
C37	87-010-404-080		CAP,E 4.7-50 M SME	△	PR111	87-026-681-080	PROTECTOR,5A 491 SERIES<EZ>
C38	87-010-196-080		C-CAP,S 0.1-25 Z F				
C39	87-012-349-080		C-CAP,S 1000P-50 J CH				
C40	87-010-147-080		C-CAP,S 3P-50 C CH GRM	MD MAIN C.B			
C42	87-010-312-080		C-CAP,S 15P-50 J CH				
				C700	87-018-134-080		CAP,TC U 0.01-16NY
C45	87-010-196-080		C-CAP,S 0.1-25 Z F	C701	87-016-462-080		C-CAP,S 1-16 Z F
C46	87-010-196-080		C-CAP,S 0.1-25 Z F	C702	87-012-286-080		C-CAP,U 0.01-25 K B
C47	87-010-196-080		C-CAP,S 0.1-25 Z F	C703	87-012-274-080		C-CAP,U 1000P-50 K B
C48	87-010-315-080		C-CAP,S 27P-50 J CH	C704	87-010-787-080		C-CAP,U 0.022-25 K B
C50	87-012-140-080		C-CAP,S 470P-50 J CH				
				C705	87-010-662-080		C-CAP,E 22-6.3 M MV
C57	87-010-316-080		C-CAP,S 33P-50 J CH	C706	87-010-662-080		C-CAP,E 22-6.3 M MV
C58	87-010-316-080		C-CAP,S 33P-50 J CH	C707	87-016-491-080		C-CAP,S 0.22-16 Z F C2021
C59	87-010-263-080		CAP,E 100-10 SME	C708	87-016-460-080		C-CAP,U 0.22-16 K B
C60	87-010-196-080		C-CAP,S 0.1-25 Z F	C709	87-010-829-080		C-CAP,U 0.047-16 Z F
C61	87-010-196-080		C-CAP,S 0.1-25 Z F				
				C710	87-016-462-080		C-CAP,S 1-16 Z F
C62	87-010-370-080		CAP,E 330-6.3 M SME	C711	87-016-491-080		C-CAP,S 0.22-16 Z F C2021
C65	87-010-404-080		CAP,E 4.7-50 M SME	C712	87-016-462-080		C-CAP,S 1-16 Z F
C66	87-010-196-080		C-CAP,S 0.1-25 Z F	C713	87-012-284-080		C-CAP,U 6800P-50 K B GRM
C67	87-010-263-080		CAP,E 100-10 SME	C714	87-012-276-080		C-CAP,U 1500P-50 K B
C68	87-010-322-080		C-CAP,S 100P-50 J CH				
				C715	87-010-829-080		C-CAP,U 0.047-16 Z F
C75	87-010-197-080		C-CAP,S 0.01-25 K B	C716	87-010-662-080		C-CAP,E 22-6.3 M MV
C76	87-010-236-080		CAP,E 1000-10 M SME	C717	87-012-286-080		C-CAP,U 0.01-25 K B
C77	87-010-263-080		CAP,E 100-10 SME	C718	87-012-195-080		C-CAP,U 100P-50 J CH
C78	87-010-197-080		C-CAP,S 0.01-25 K B	C719	87-012-286-080		C-CAP,U 0.01-25 K B
C79	87-010-197-080		C-CAP,S 0.01-25 K B				
				C720	87-016-436-080		C-CAP,TN 47-4 B2
C80	87-010-112-080		CAP,E 100-16 M SME	C721	87-010-662-080		C-CAP,E 22-6.3 M MV
C81	87-010-405-080		CAP,E 10-50 M SME	C722	87-010-787-080		C-CAP,U 0.022-25 K B
C82	87-010-405-080		CAP,E 10-50 M SME	C723	87-010-829-080		C-CAP,U 0.047-16 Z F
C83	87-010-181-080		C-CAP,S 1800P B K	C724	87-010-662-080		C-CAP,E 22-6.3 M MV
C84	87-010-181-080		C-CAP,S 1800P B K				
				C725	87-010-662-080		C-CAP,E 22-6.3 M MV
C90	87-010-197-080		C-CAP,S 0.01-25 K B	C726	87-010-831-080		C-CAP,U 0.1-16 Z F
C91	87-010-404-080		CAP,E 4.7-50 M SME	C727	87-016-462-080		C-CAP,S 1-16 Z F
C92	87-010-221-080		CAP,E 470-10 M SME	C728	87-012-276-080		C-CAP,U 1500P-50 K B
C93	87-018-134-080		CAP,TC U 0.01-16NY	C730	87-012-196-080		C-CAP,U 120P-50 J CH
C94	87-018-134-080		CAP,TC U 0.01-16NY				
				C731	87-010-787-080		C-CAP,U 0.022-25 K B
C95	87-010-197-080		C-CAP,S 0.01-25 K B	C732	87-016-462-080		C-CAP,S 1-16 Z F
C96	87-010-221-080		CAP,E 470-10 M SME	C733	87-012-286-080		C-CAP,U 0.01-25 K B
C97	87-010-197-080		C-CAP,S 0.01-25 K B	C734	87-010-831-080		C-CAP,U 0.1-16 Z F
C98	87-012-154-080		C-CAP,S 150P-50 J CH GRM	C735	87-012-195-080		C-CAP,U 100P-50 J CH
C101	87-010-322-080		C-CAP,S 100P-50 J CH				
				C736	87-012-279-080		C-CAP,U 2700P-50 K B GRM
C102	87-010-322-080		C-CAP,S 100P-50 J CH	C737	87-016-462-080		C-CAP,S 1-16 Z F
C103	87-010-322-080		C-CAP,S 100P-50 J CH	C738	87-010-831-080		C-CAP,U 0.1-16 Z F
C104	87-010-322-080		C-CAP,S 100P-50 J CH	C739	87-012-166-080		C-CAP,U 4P-50 CH
C105	87-010-322-080		C-CAP,S 100P-50 J CH	C740	87-012-166-080		C-CAP,U 4P-50 CH
CN1	88-802-081-290		CONN ASSY,8P				

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C741	87-010-831-080	C-CAP,U 0.1-16 Z F		FC705	86-CD0-614-010		FF-CABLE, 8P 1.25 70MM
C743	87-010-662-080	C-CAP,E 22-6.3 M MV		L701	87-A50-010-080		C-COIL, 22UH LQH3C
C744	87-A10-057-080	C-CAP,TN 100-4 M F95 E		L702	87-A50-012-080		C-COIL, 100UH LQH3C
C746	87-010-831-080	C-CAP,U 0.1-16 Z F		L703	87-A50-117-080		C-COIL,10UHLQH3C
C747	87-016-462-080	C-CAP,S 1-16 Z F		L704	87-A50-117-080		C-COIL,10UHLQH3C
C749	87-010-779-080	C-CAP,E 100-6.3 M MV		L705	87-A50-010-080		C-COIL, 22UH LQH3C
C750	87-010-464-080	C-CAP,E 220-4 MV		L706	87-005-777-080		C-COIL, 1UH J NL252018
C751	87-010-252-010	C-CAP,E 1000-6.3 M SME		L707	87-A50-013-080		C-COIL,560UHLQH3C
C752	87-010-464-080	C-CAP,E 220-4 MV		L708	87-A50-013-080		C-COIL, 560UH LQH3C
C753	87-010-779-080	C-CAP,E 100-6.3 M MV		L709	87-A50-012-080		C-COIL, 100UH LQH3C
C754	87-016-462-080	C-CAP,S 1-16 Z F		L710	84-HD1-618-080		C-COIL, 33UH M D75C
C755	87-010-831-080	C-CAP,U 0.1-16 Z F		L711	84-HD1-618-080		C-COIL, 33UH M D75C
C756	87-A10-222-040	CAP,AS 22-10 OS		L712	87-A50-117-080		C-COIL, 10UH LQH3C
C757	87-010-875-080	C-CAP,1000P-500 K W5R		L713	87-A50-108-080		C-COIL, 33UH K NLC25
C758	87-010-831-080	C-CAP,U 0.1-16 Z F		L715	87-A50-117-080		C-COIL,10UHLQH3C
C759	87-010-831-080	C-CAP,U 0.1-16 Z F		L720	87-A50-162-080		C-COIL,ZJYS51R5-2PBT
C761	87-016-462-080	C-CAP,S 1-16 Z F		L721	87-A50-163-080		C-COIL,ZBFS5101-PT
C762	87-016-462-080	C-CAP,S 1-16 Z F		L722	87-A50-163-080		C-COIL,ZBFS5101-PT
C763	87-010-831-080	C-CAP,U 0.1-16 Z F		L801	87-A50-116-080		C-COIL,4.7UHLQH3C
C764	87-010-831-080	C-CAP,U 0.1-16 Z F		L802	87-A50-116-080		C-COIL,4.7UHLQH3C
C766	87-010-831-080	C-CAP,U 0.1-16 Z F		L803	87-005-774-080		C-COIL,4BLH
C767	87-010-779-080	C-CAP,E 100-6.3 M MV		L804	87-005-774-080		C-COIL,4BLH
C768	87-010-662-080	C-CAP,E 22-6.3 M MV		R749	87-022-239-080		C-RES,U 10K-1/16W F
C769	87-010-464-080	C-CAP,E 220-4		R753	87-022-239-080		C-RES,U 10K-1/16W F
C786	87-A90-396-080	C-FLTR,EMINFM40R01C101		R757	87-022-239-080		C-RES,U 10K-1/16W F
C788	87-010-831-080	C-CAP,U 0.1-16 Z F		SW902	87-036-350-080		C-SW,PUSH SPPW9-4.8
C789	87-010-831-080	C-CAP,U 0.1-16 Z F		SW903	87-036-366-080		C-SW,PUSH SPPW91055A
C790	87-012-274-080	C-CAP,U 1000P-50 KB		VR701	87-024-411-080		C-SFR,K 47K H RH03A3A
C791	87-012-274-080	C-CAP,U 1000P-50 KB		VR702	87-024-401-080		C-SFR,K 1K H RH03A3A
C798	87-012-195-080	C-CAP,U 100P-50 J CH		VR703	87-024-409-080		C-SFR,K 22K H RH03A3A
C801	87-010-662-080	C-CAP,E 22-6.3 M MV		X701	87-A70-048-010		VIB,45.1584MHZ
C802	87-010-662-080	C-CAP,E 22-6.3 M MV		X702	87-030-369-080		C-VIB,CER 12.000MHZ PBRC-B
C803	87-012-337-080	C-CAP,U 56P-50 J CH					
C804	87-012-337-080	C-CAP,U 56P-50 J CH					
C805	87-012-180-080	C-CAP,U 22P-50 J CH		DECK C.B			
C806	87-012-180-080	C-CAP,U 22P-50 J CH		SFR1	87-024-581-010		SFR,3.3KH KVSF 637A
C807	87-012-273-080	C-CAP,U 820P-50 K B		SOL2	82-ZM1-618-310		SOL ASSY,27
C808	87-012-273-080	C-CAP,U 820P-50 K B		SW2	87-A90-248-010		SW,MICRO ESE11SH2CXQ
C809	87-016-561-080	C-CAP,E 10-6.3 M 85 1 MF		SW3	87-A90-248-010		SW,MICRO ESE11SH2CXQ
C810	87-016-561-080	C-CAP,E 10-6.3 M 85 1 MF		SW4	87-A90-248-010		SW,MICRO ESE11SH2CXQ
C811	87-016-561-080	C-CAP,E 10-6.3 M 85 1 MF		SW5	87-A90-248-010		SW,MICRO ESE11SH2CXQ
C812	87-016-561-080	C-CAP,E 10-6.3 M 85 1 MF		SW6	87-A90-248-010		SW,MICRO ESE11SH2CXQ
C813	87-012-267-080	C-CAP,U 270P-50 K B GRM					
C814	87-012-267-080	C-CAP,U 270P-50 K B GRM		RELAY C.B			
C815	87-012-267-080	C-CAP,U 270P-50 K B GRM					
C816	87-012-267-080	C-CAP,U 270P-50 K B GRM		MOTOR-1 C.B			
C817	87-010-831-080	C-CAP,U 0.1-16 Z F					
C818	87-010-661-080	C-CAP,E 10-16 M MV		SW7	87-036-110-010		SW,MICRO SPPB62
C819	87-A10-057-080	C-CAP,TN 100-4 M F95 E		M2	87-A90-346-010		MOT,RF-500TB 12560
C820	87-010-831-080	C-CAP,U 0.1-16 Z F					
C821	87-016-561-080	C-CAP,E 10-6.3 M 85 1 MF		CD MOTOR C.B			
C822	87-010-831-080	C-CAP,U 0.1-16 Z F					
C823	87-016-661-080	C-CAP,E 10-16 M 85 1 MF		M20	87-045-358-010		MOT,RF-310TA 43
C824	87-010-831-080	C-CAP,U 0.1-16 Z F		M21	87-045-356-010		MOT,RF-310TA 30
C825	87-010-831-080	C-CAP,U 0.1-16 Z F		SW1	87-A90-042-010		SW,LEAF MSW 17310
C826	87-016-446-080	C-CAP,TN 220-4 M					
C827	87-A10-259-080	C-CAP,E 4.7-16 MFA6		MOTOR-2 C.B			
C828	87-010-661-080	C-CAP,E 10-16 M MV					
C829	87-010-831-080	C-CAP,U 0.1-16 Z F		M1	87-045-305-010		MOT,RF-500TB
C830	87-010-661-080	C-CAP,E 10-16 M MV		SW1	87-036-110-010		SW,PUSH SPPB 62
C831	87-010-831-080	C-CAP,U 0.1-16 Z F		SW2	87-036-110-010		SW,PUSH SPPB 62
C832	87-010-831-080	C-CAP,U 0.1-16 Z F					
C833	87-010-831-080	C-CAP,U 0.1-16 Z F		MOTOR-3 C.B			
C834	87-010-657-080	C-CAP,E 1-50					
C835	87-010-662-080	C-CAP,E 22-6.3 M MV		C1	87-010-263-080		CAP,E 100-10 SME
C836	87-012-286-080	C-CAP,U 0.01-25 K B		C3	87-018-209-080		CAP,TC U 0.1-50 Z F UP050
C901	87-A10-019-080	C-CAP,TN 10-6.3 M A SV-M		M1	87-045-305-010		MOT,RF-500TB
C910	87-012-280-080	C-CAP,U 3300P-50 K B		PH1	87-026-573-010		SNSR,PHOTO GP1S53
D702	87-017-925-070	C-VARI-CAP,KV1460					
FC702	86-ZG2-617-010	FF-CABLE, 11P 0.5 100MM MECHA					

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
SW C.B			
SW1	87-A90-117-010		SW,PUSH 1-1-1 MPU10371MLB0 MIC
SW2	87-A90-117-010		SW,PUSH 1-1-1 MPU10371MLB0 MIC
DRV C.B			
C902	87-010-787-080		C-CAP,U 0.022-25 K B
C903	87-010-787-080		C-CAP,U 0.022-25 K B
C904	87-010-829-080		C-CAP,U 0.047-16 Z F
C905	87-012-274-080		C-CAP,U 1000P-50 K B
C906	87-012-274-080		C-CAP,U 1000P-50 K B
C907	87-012-274-080		C-CAP,U 1000P-50 K B
C908	87-010-831-080		C-CAP,U 0.1-16 Z F
C909	87-010-831-080		C-CAP,U 0.1-16 Z F
C911	87-016-462-080		C-CAP,S 1-16 Z F
FC900	86-ZG2-618-010		FF-CABLE, 4P 2 20MM

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
L901	87-A50-010-080		C-COIL, 22UH LQH3C
SW901	87-036-269-080		C-SW,PUSH 1-1-1 ESE102MH2

OWH C.B

CN903	86-CD0-615-010	CONN ASSY,2P OWH
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FRONT-CON C.B

チップ抵抗部品コード/CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち


Chip Resistor Part Coding



A
抵抗部品コード
Resistor Code

桁表示
Figure
抵抗値
Value of resistor

チップ抵抗 Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形/Form	L	W	t	
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



ECB

2SA952
2SC1815
2SC2001
2SD655



ECB

2SC3266
KTA1266



ECB

2SA933S
DTA114YS
DTA114ES



ECB

2SA1296
KTC3198



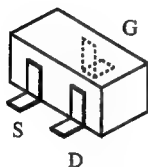
BCE

2SB1370

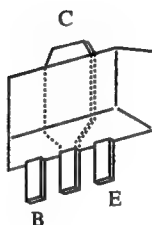


SGD

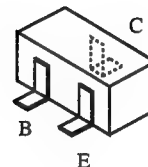
2SK246



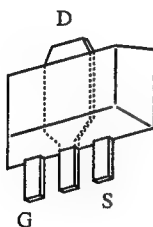
2SK543



2SA1213



2SA1162	DTA124EK
2SA1588	DTA143EK
2SC2712	DTA144EK
2SC2714	DTA144TK
2SC3265	DTC114EK
2SC4116	DTC114TK
2SD2114	DTC114YK
DTA114EK	DTC144WK
DTA114TK	RN2305



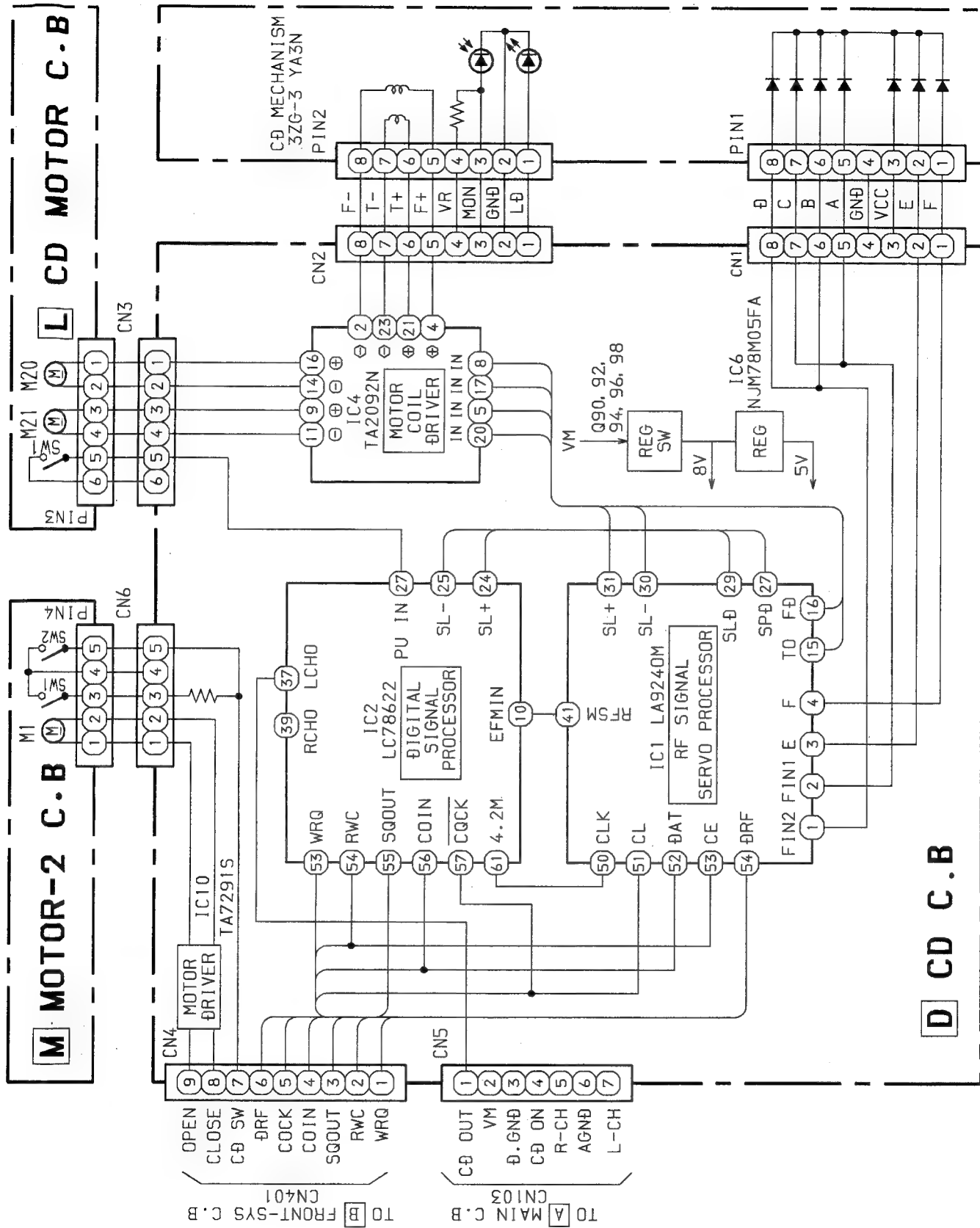
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2SK1764
2SK2315

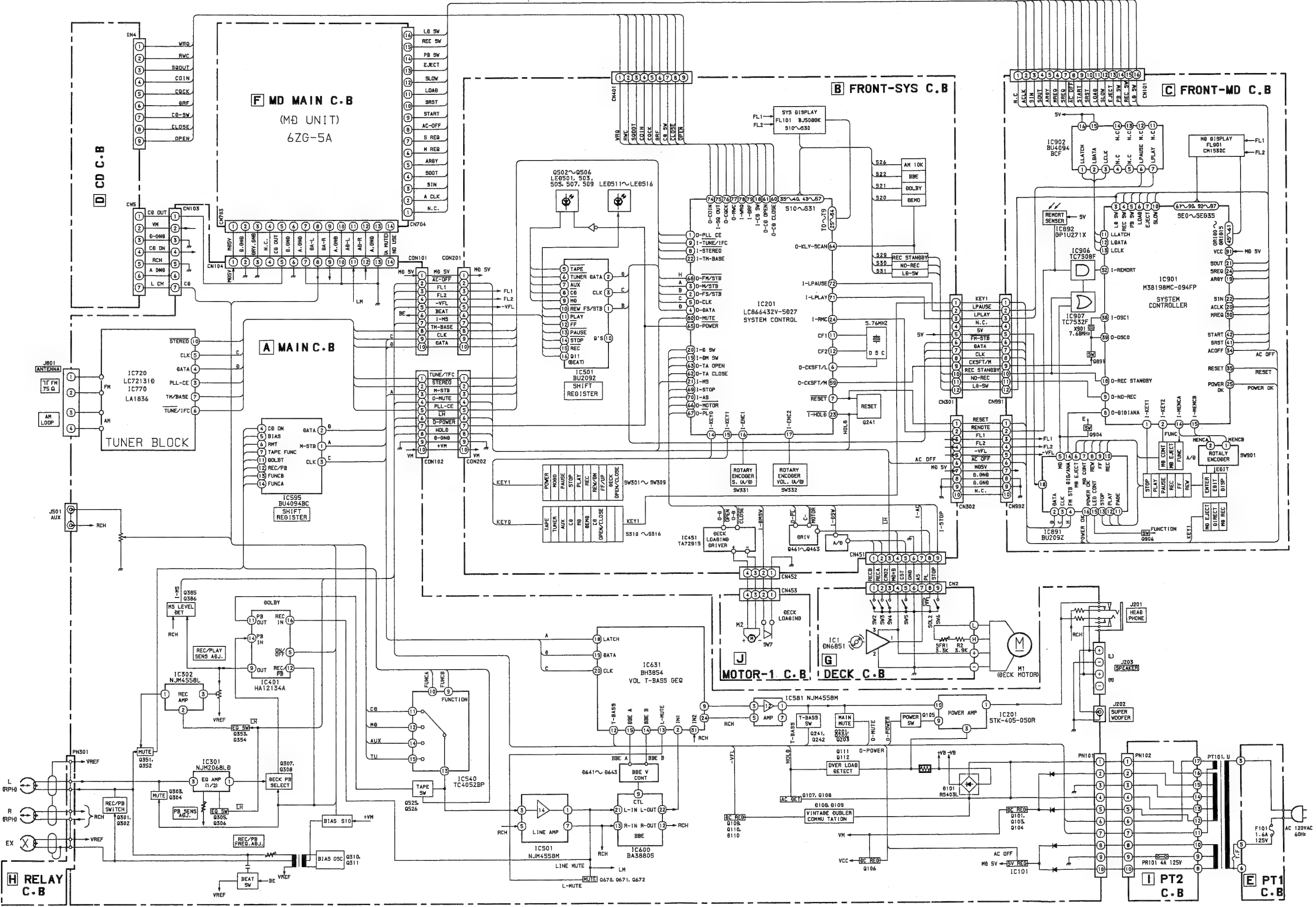


ECB

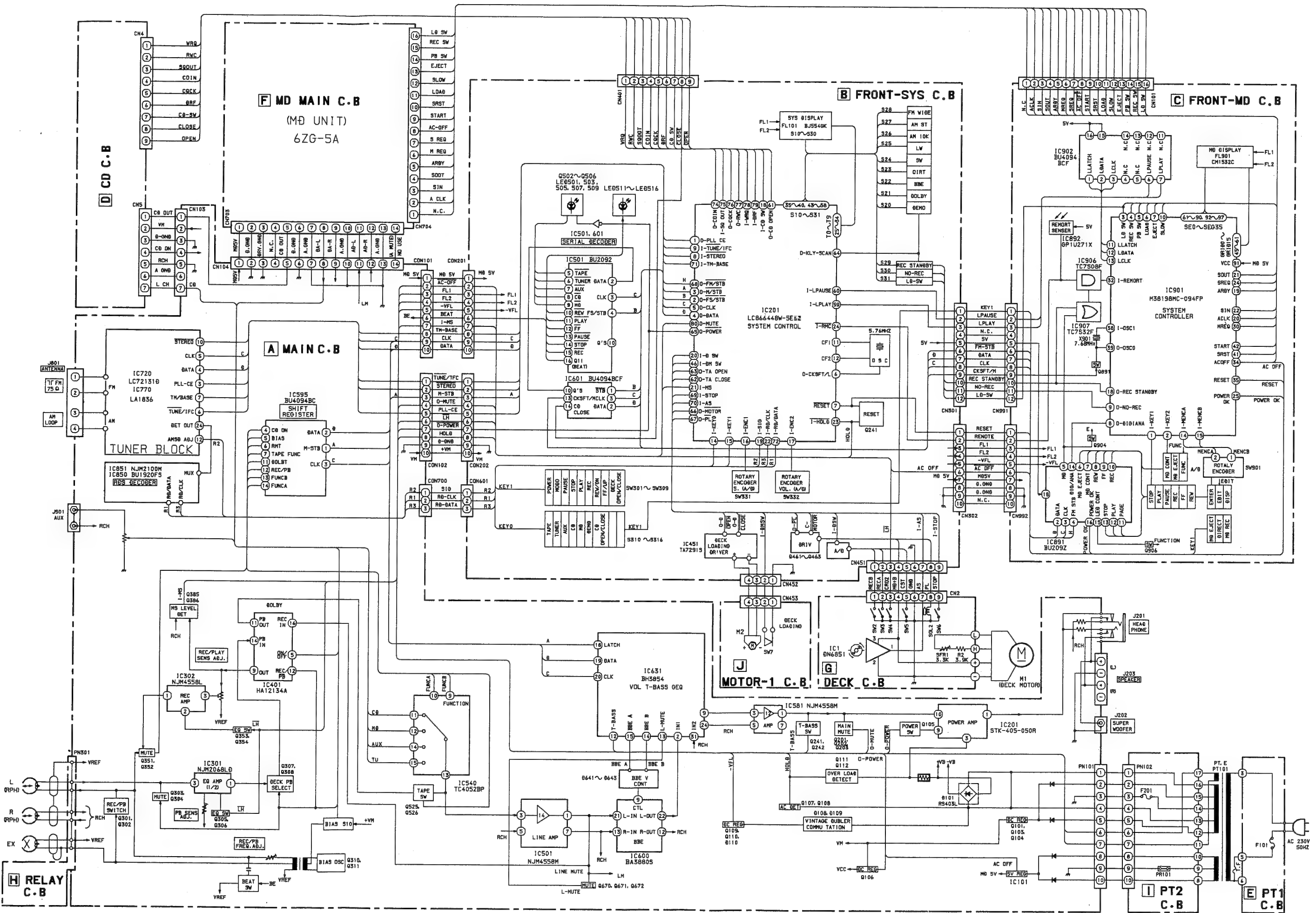
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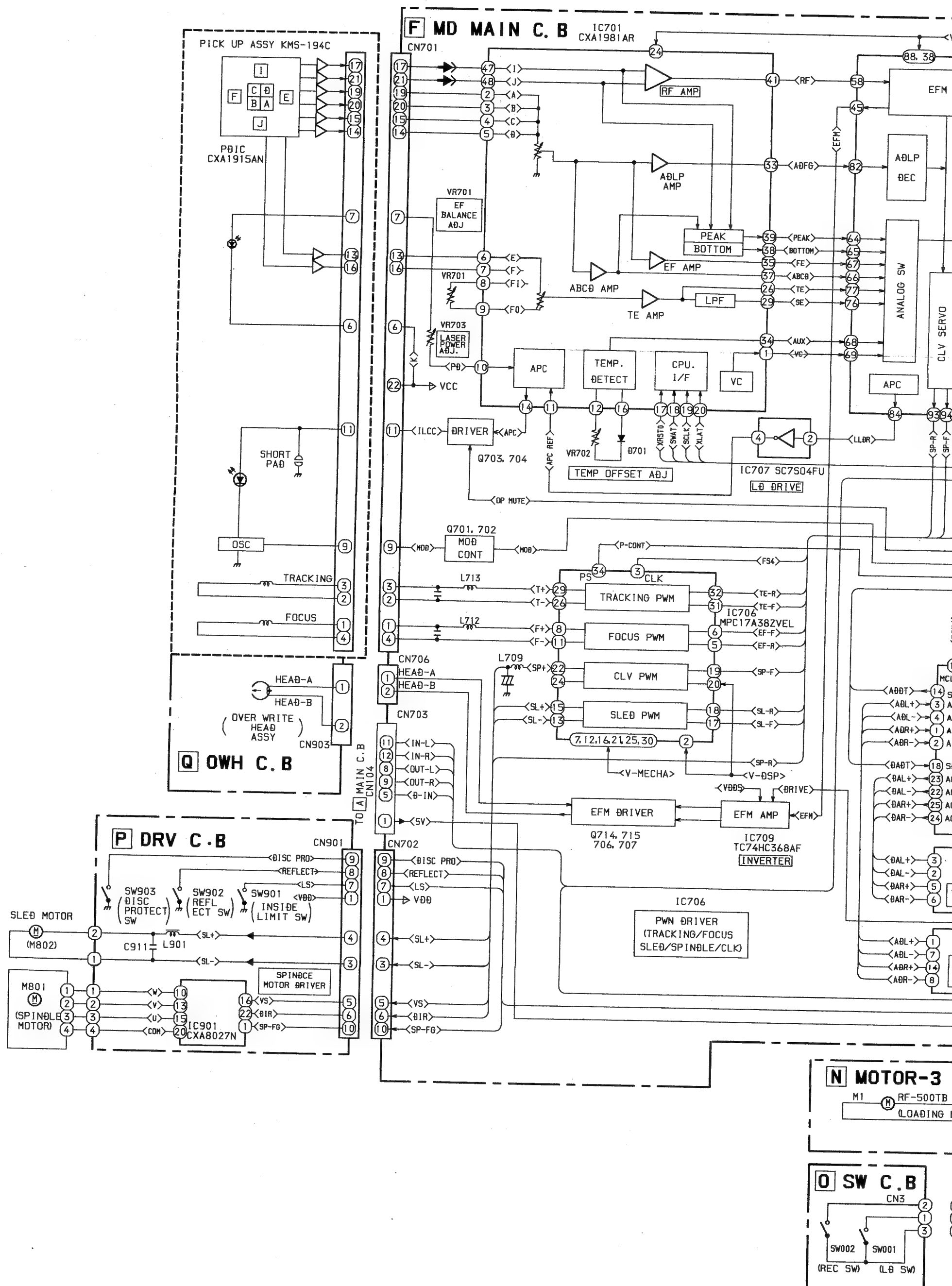
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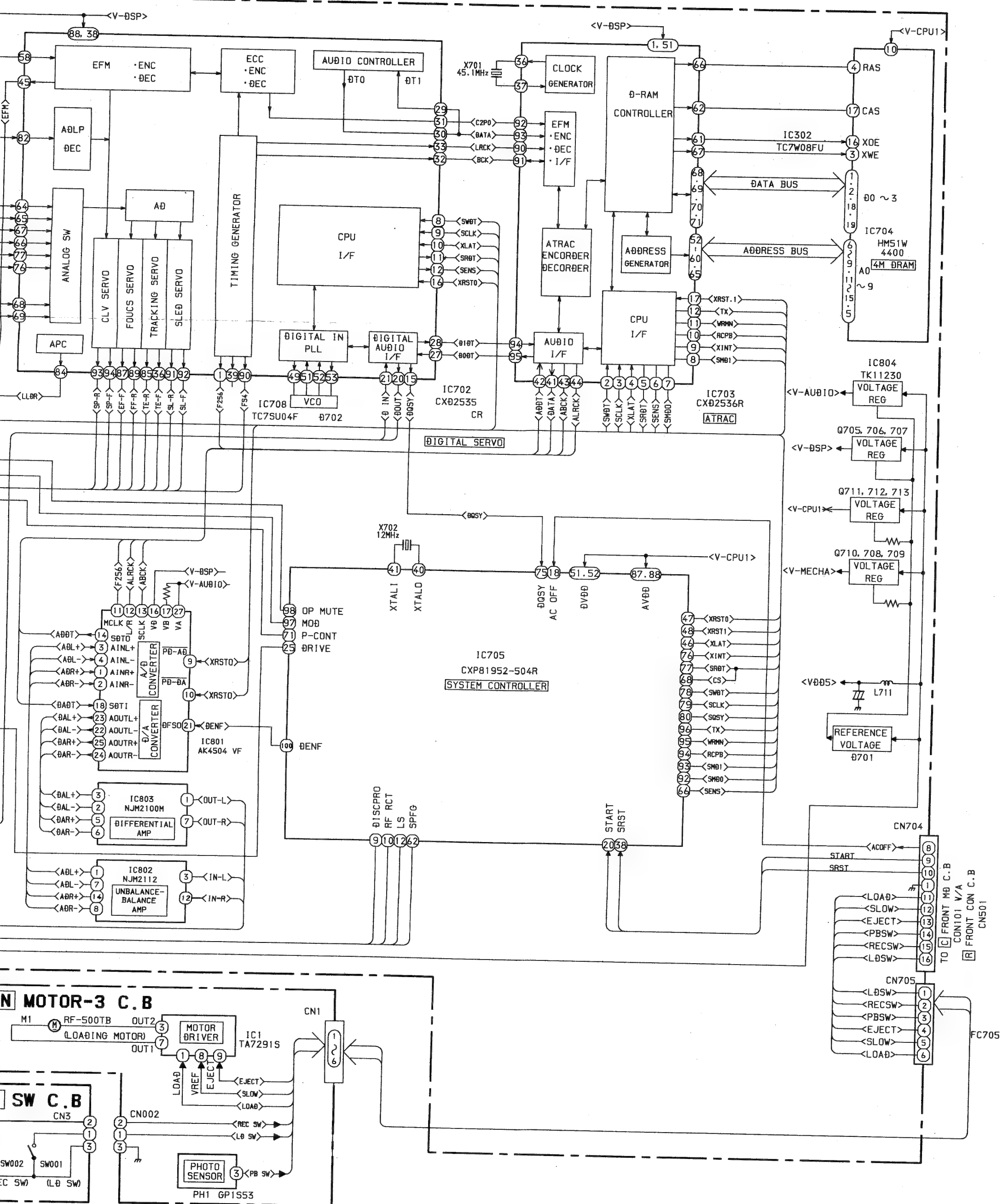


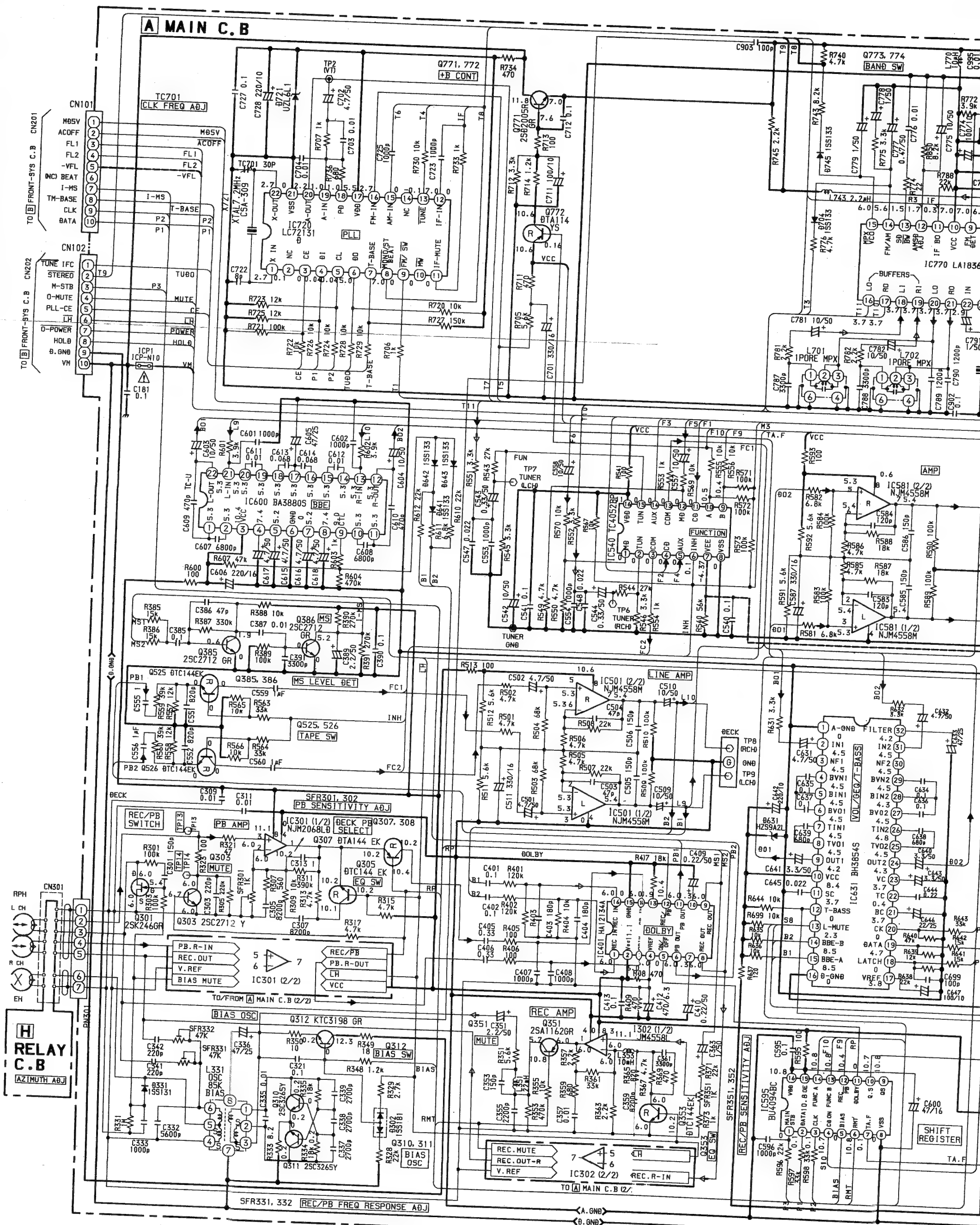


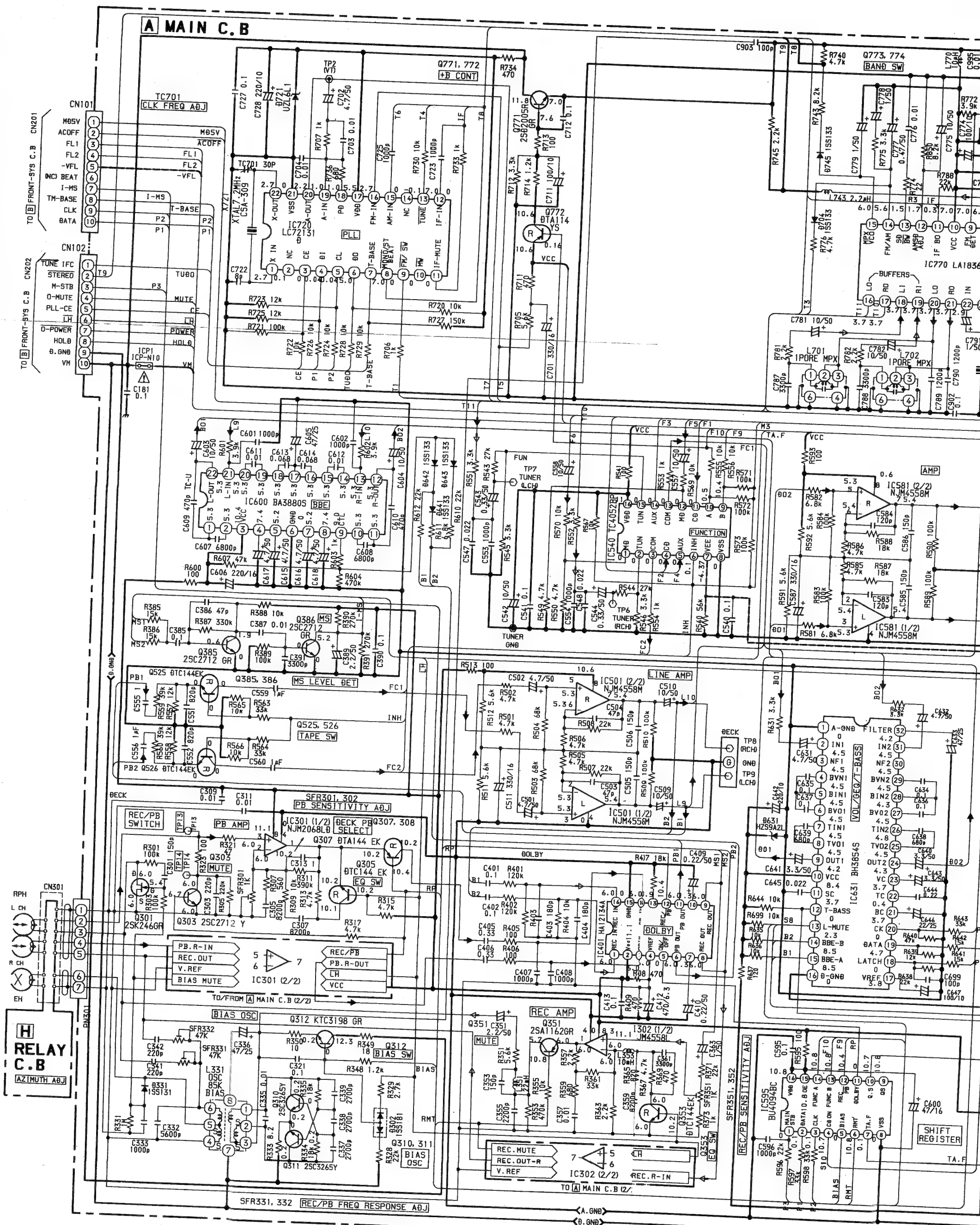
BLOCK DIAGRAM – 3 (MAIN / FRONT : EZ)

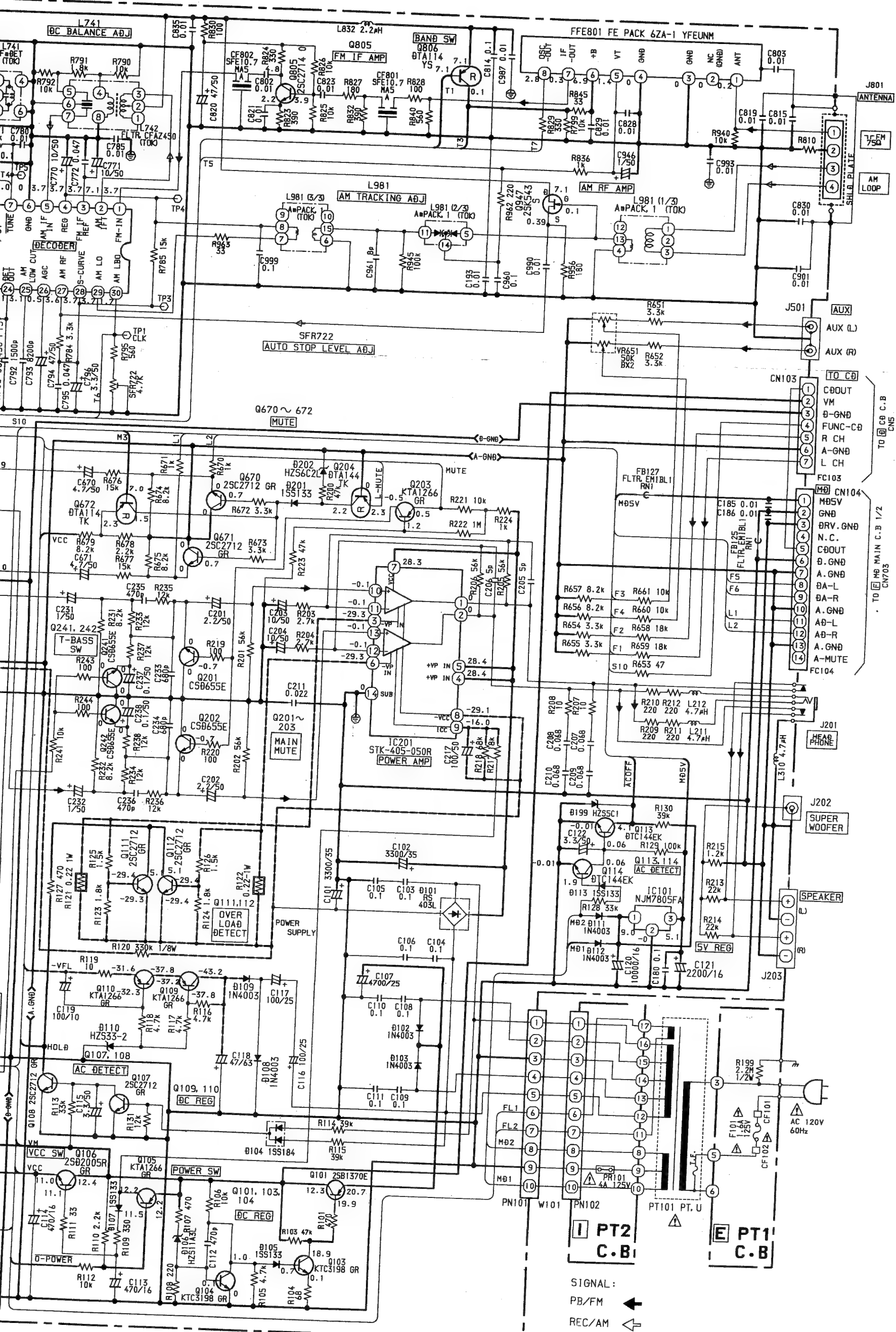


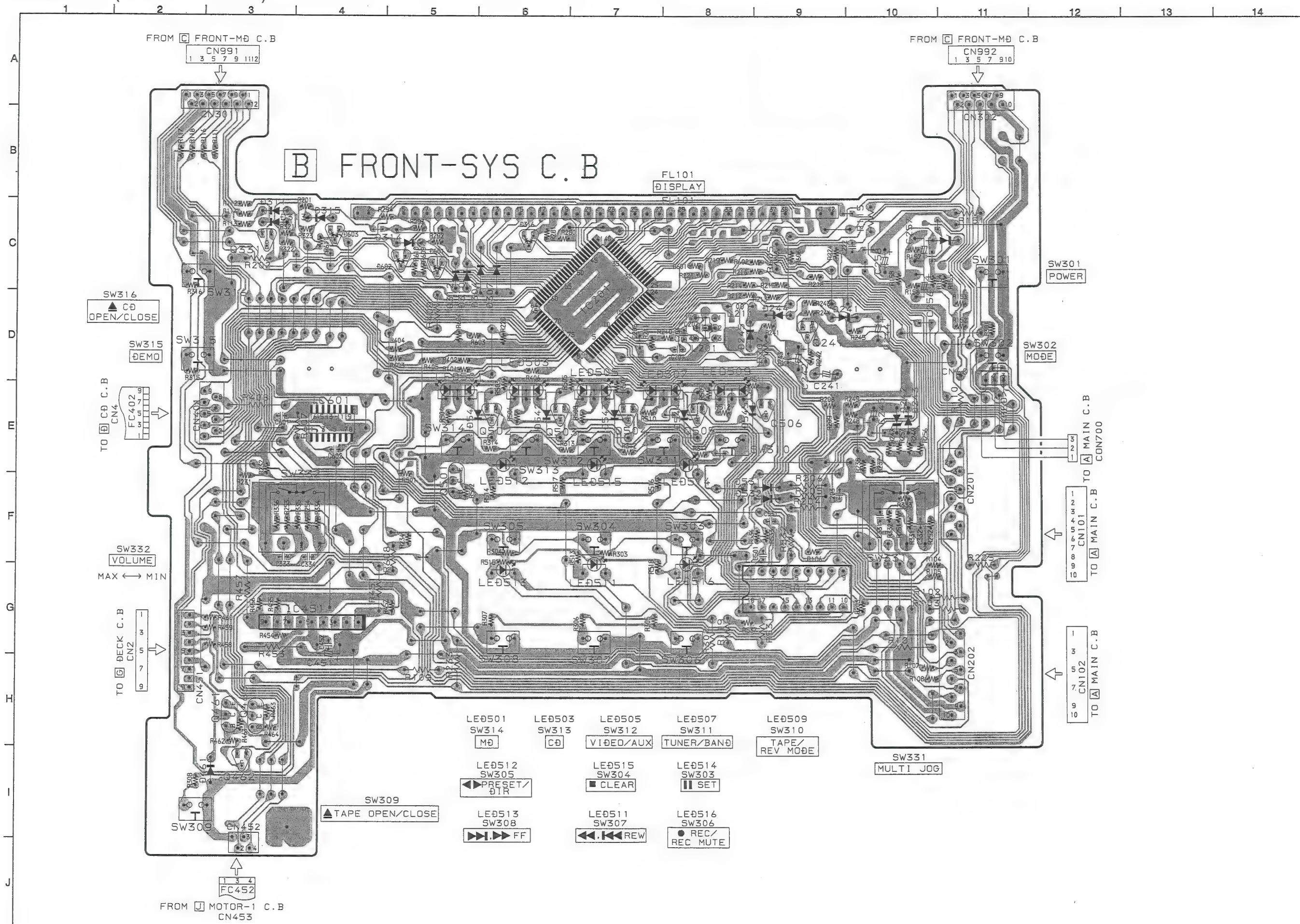










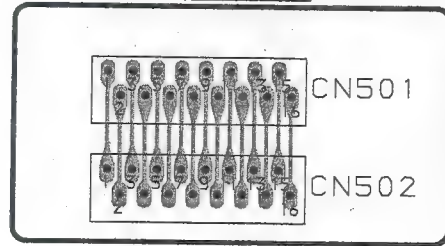
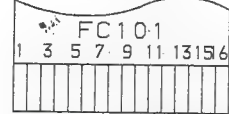




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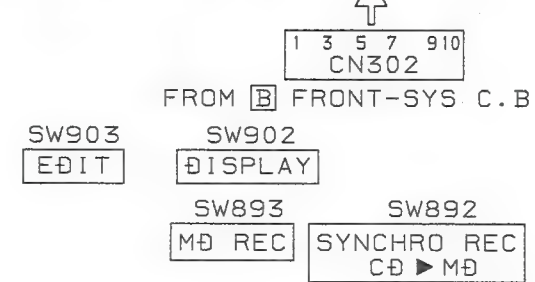
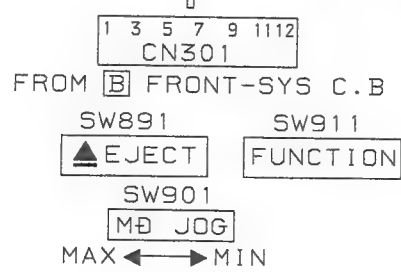
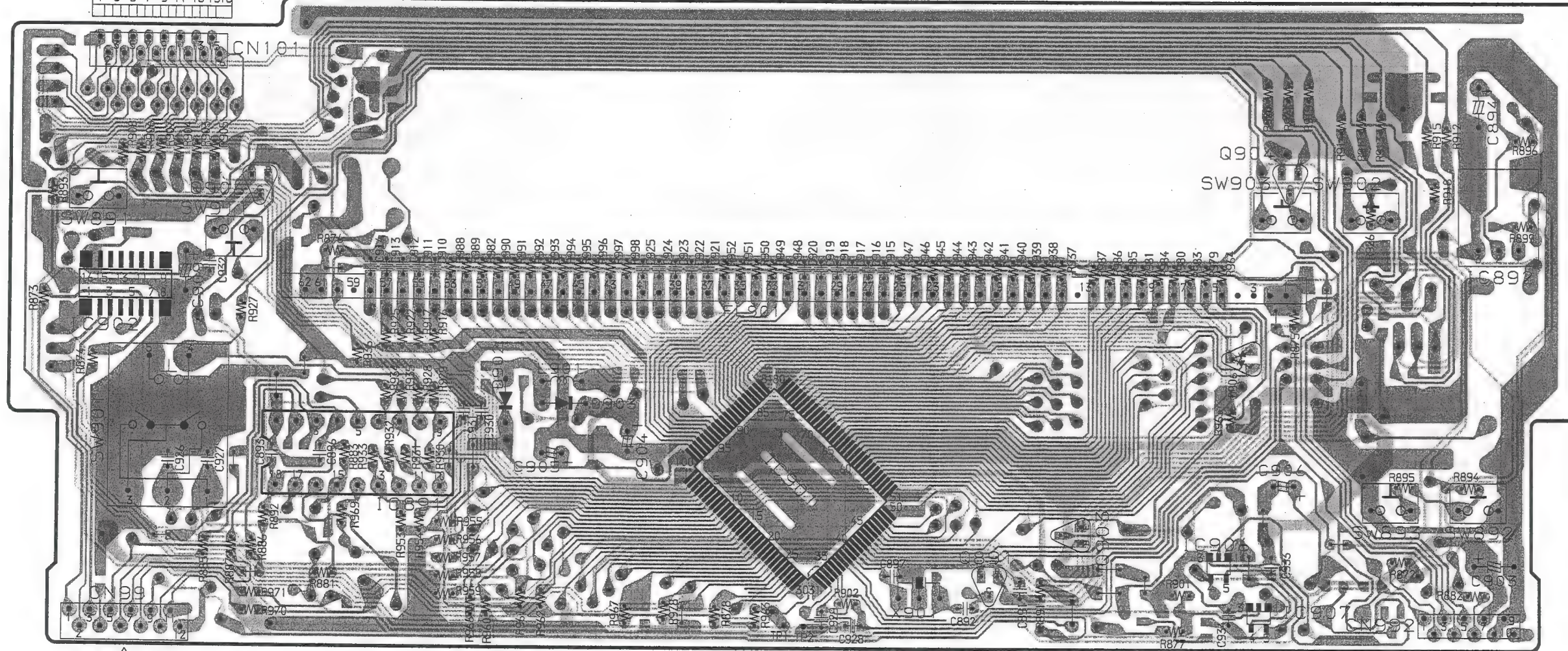
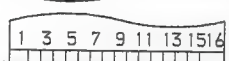
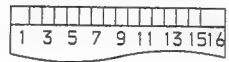
TO [F] MD MAIN C.B
CN704

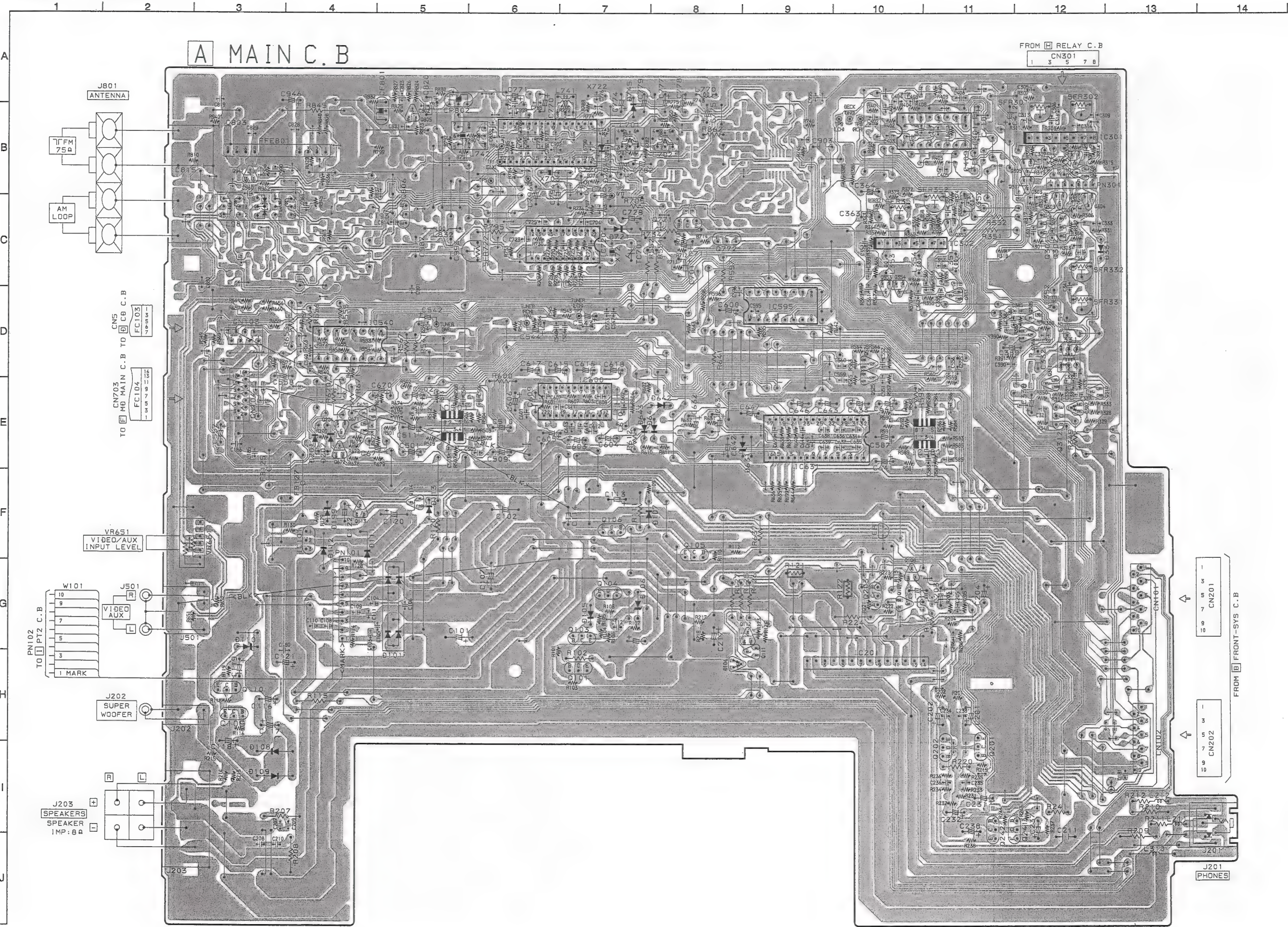


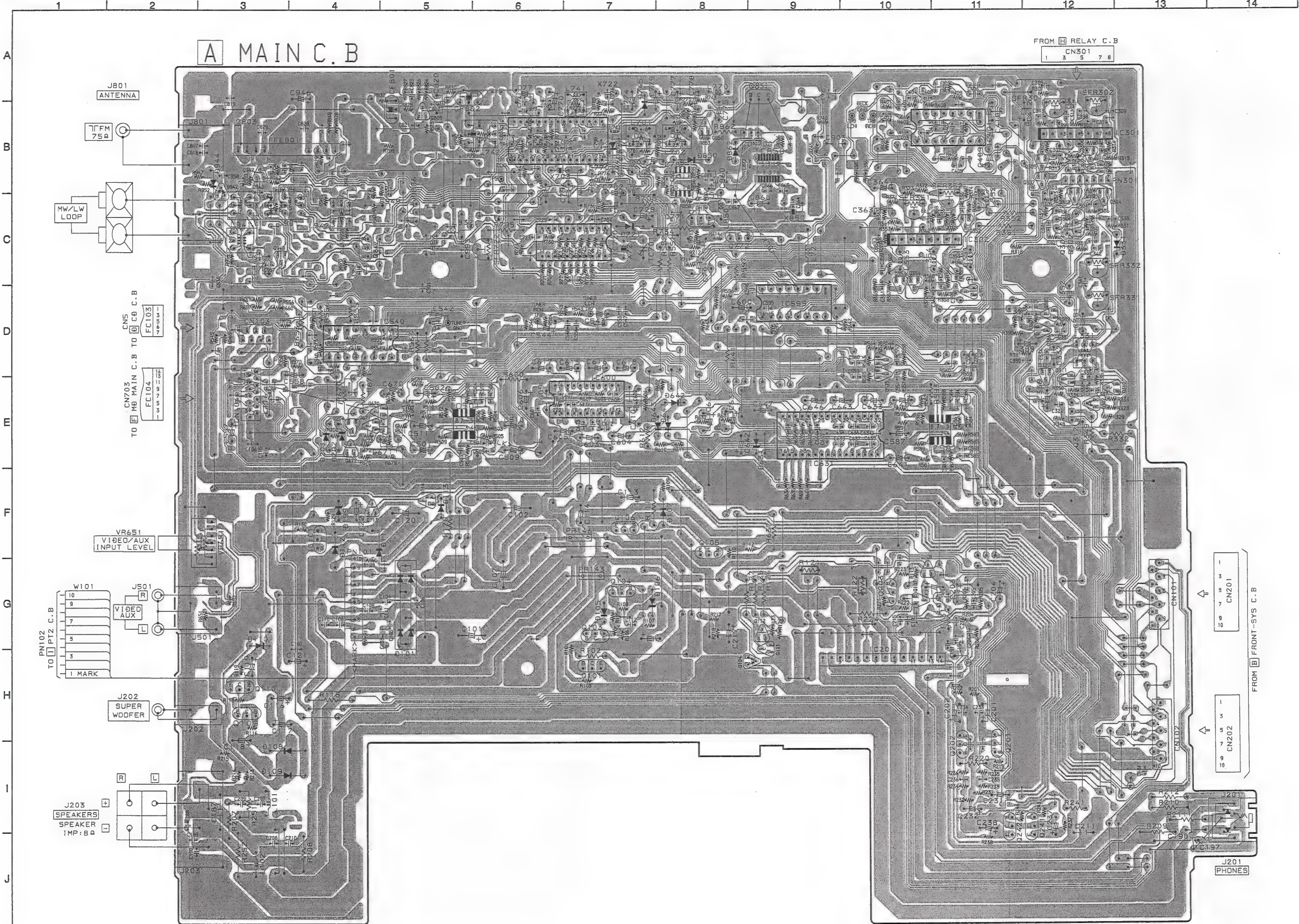
[R] FRONT-CON C.B

[C] FRONT-MD C.B

FL901
MD DISPLAY







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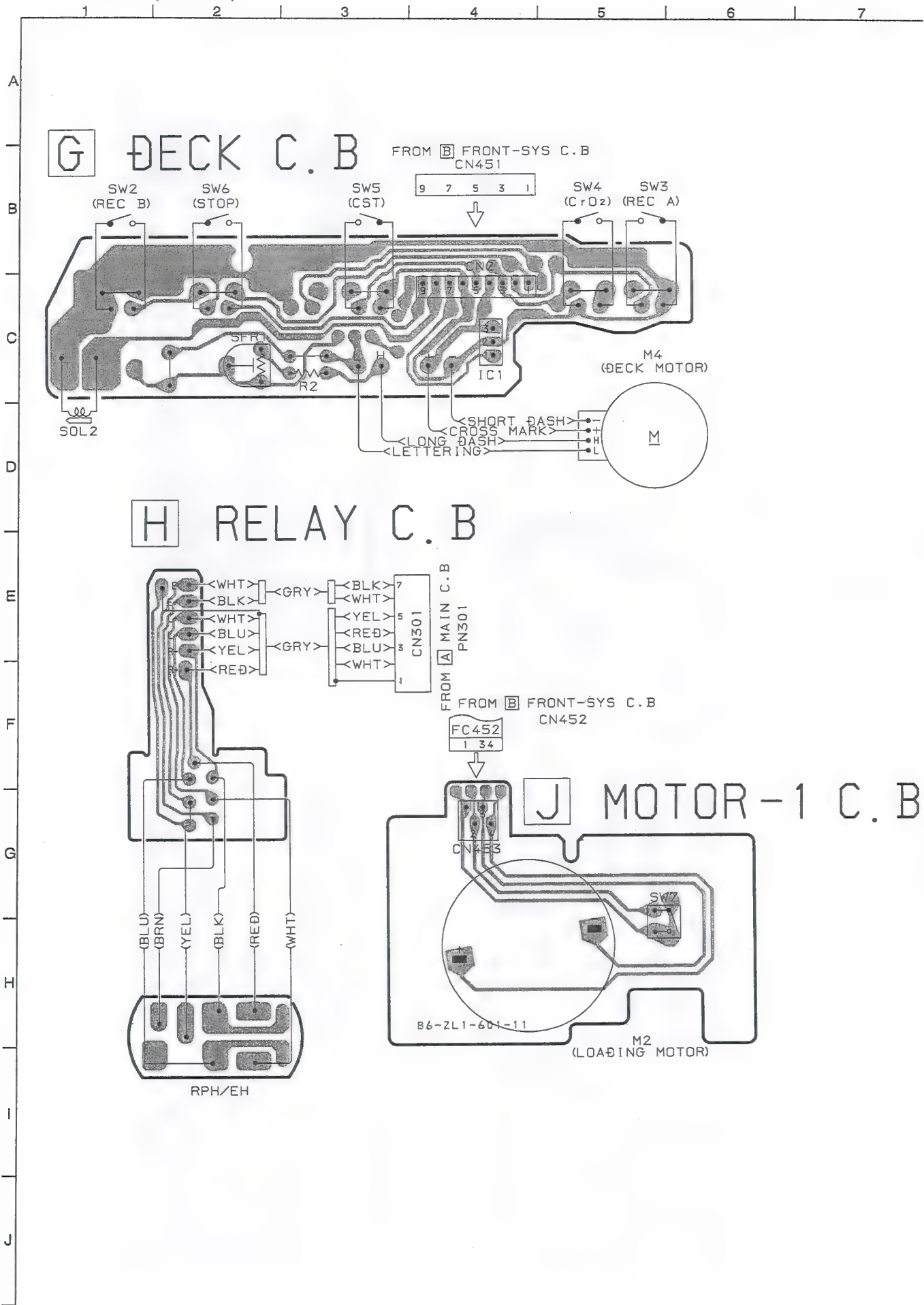
A MAIN C.B

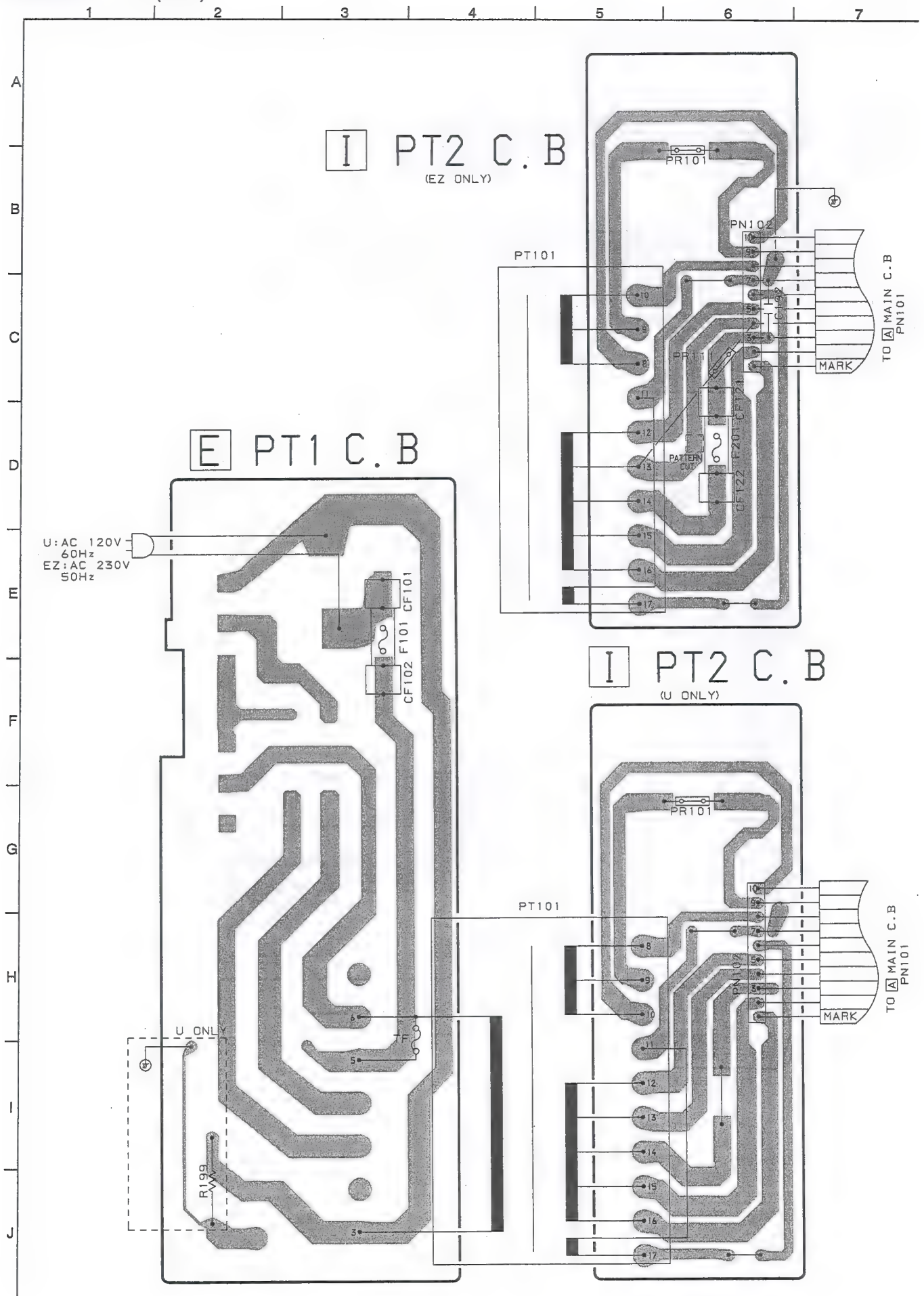
FROM RELAY C.B
CN301
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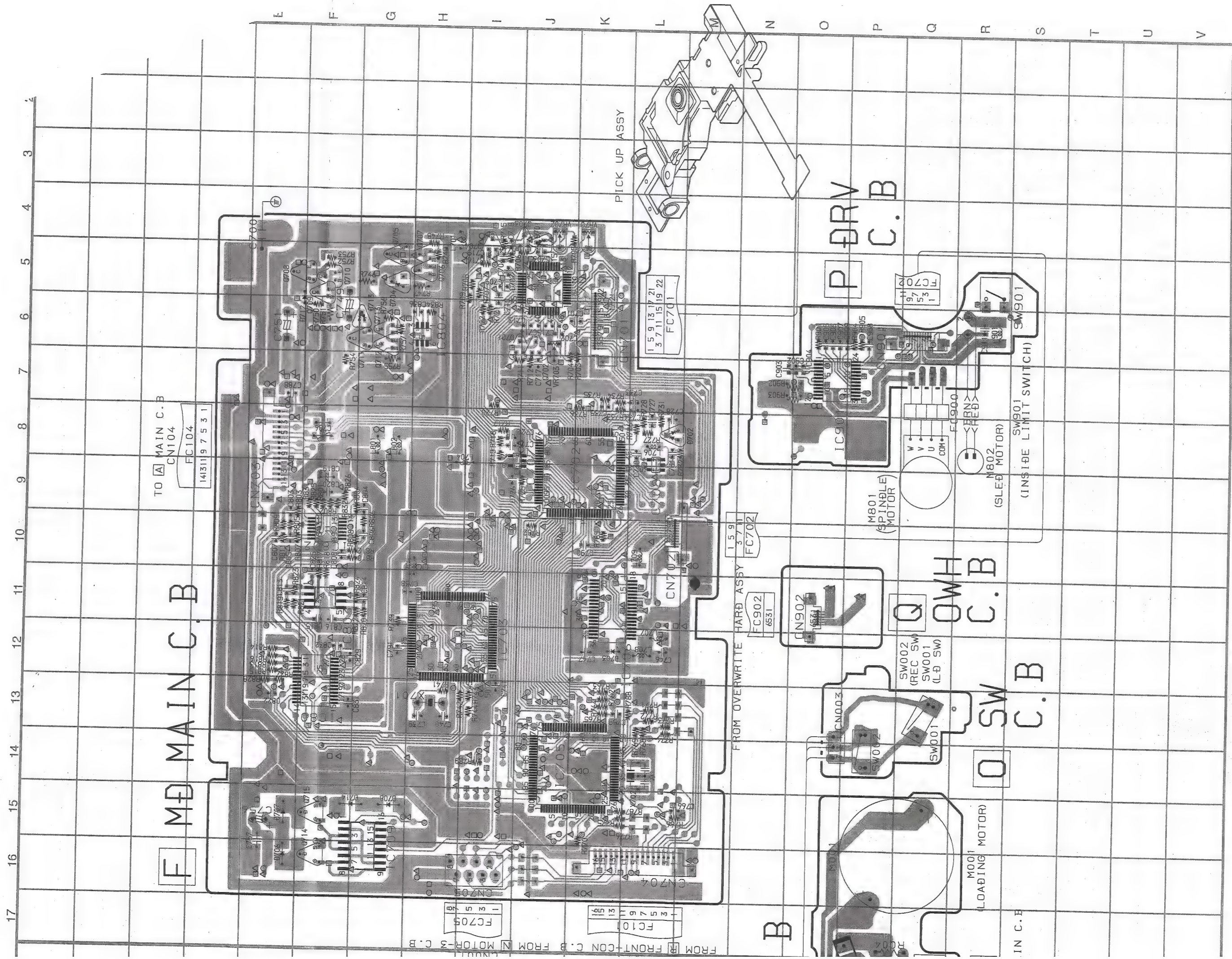
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CN201

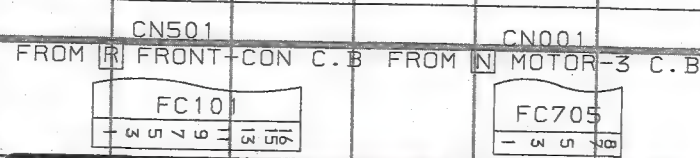
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CN202

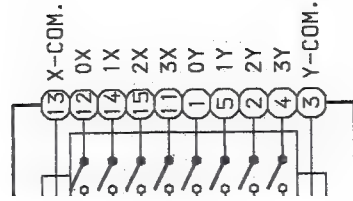
FROM FRONT-SYS C.B



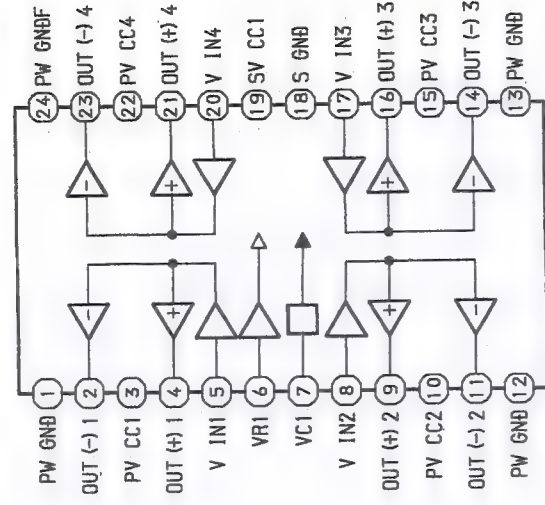




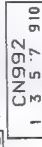




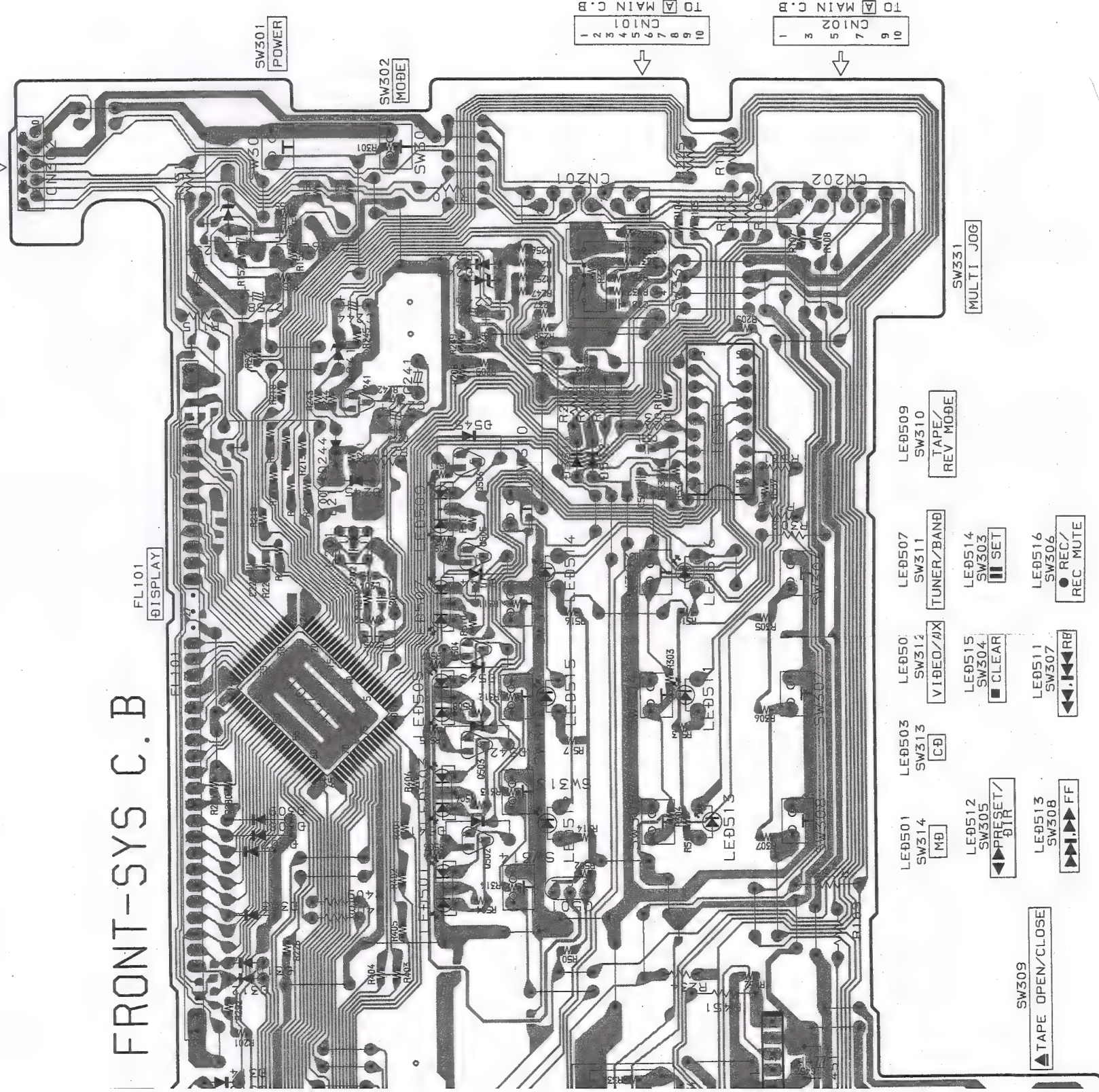
ON SWITCH	
Y0	X0
Y1	X1
Y2	X2
Y3	X3
—	—

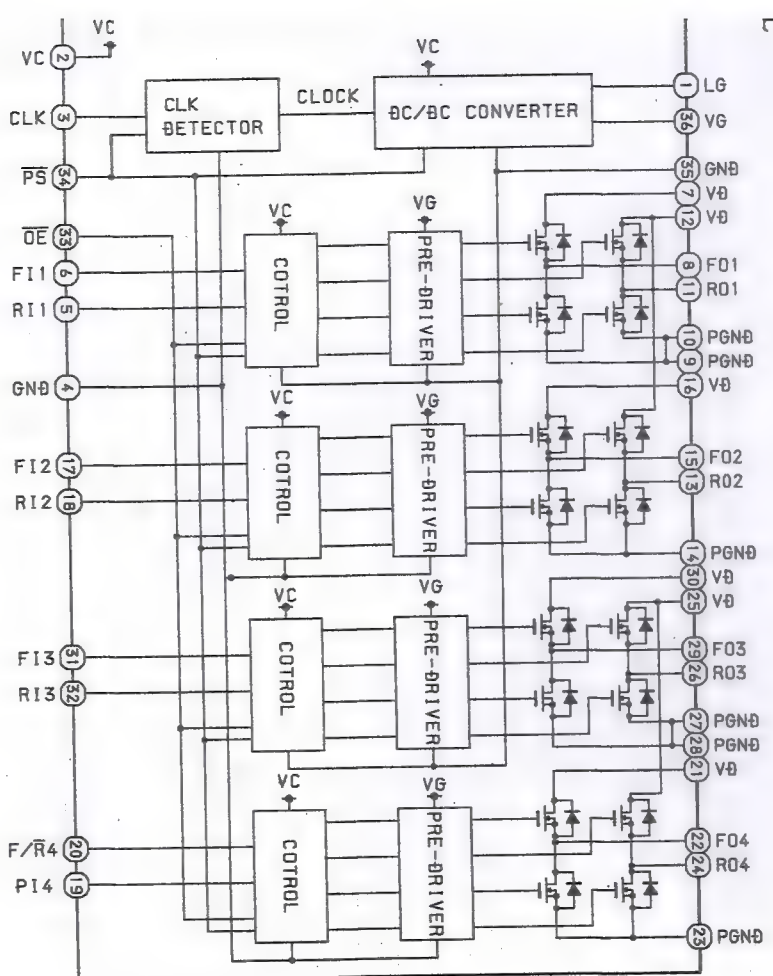
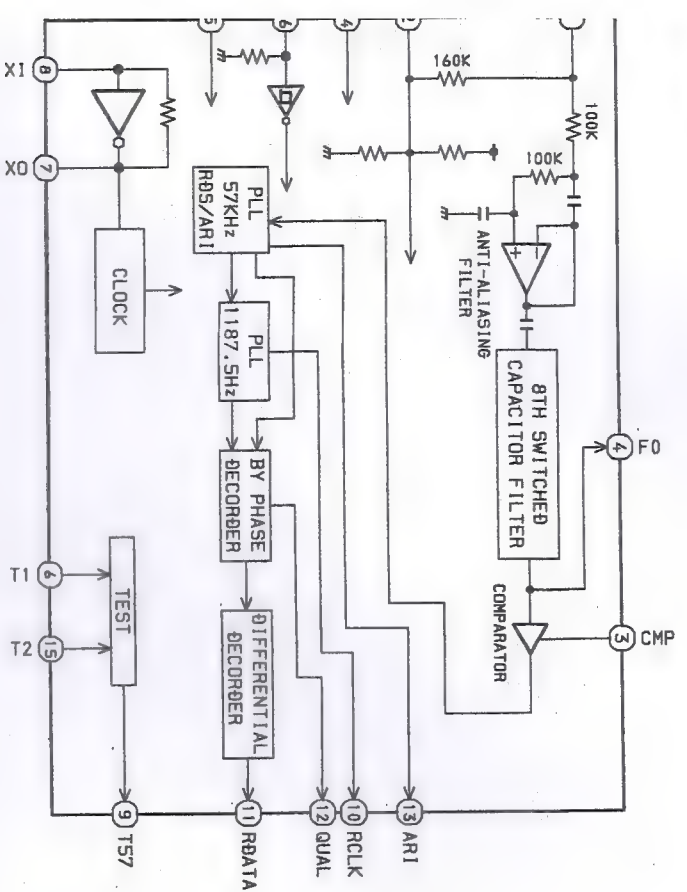


FROM [C] FRONT-MB C.B



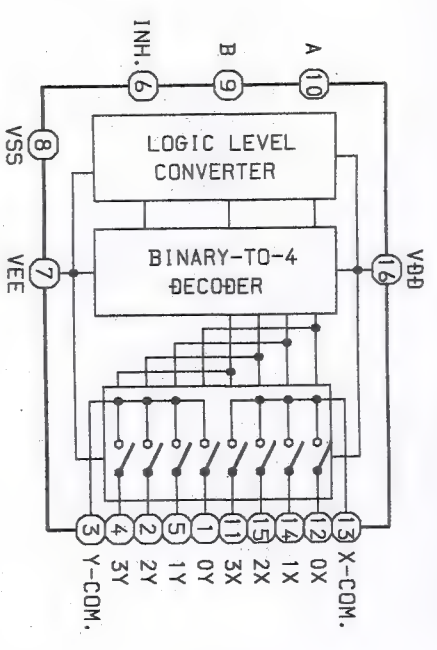
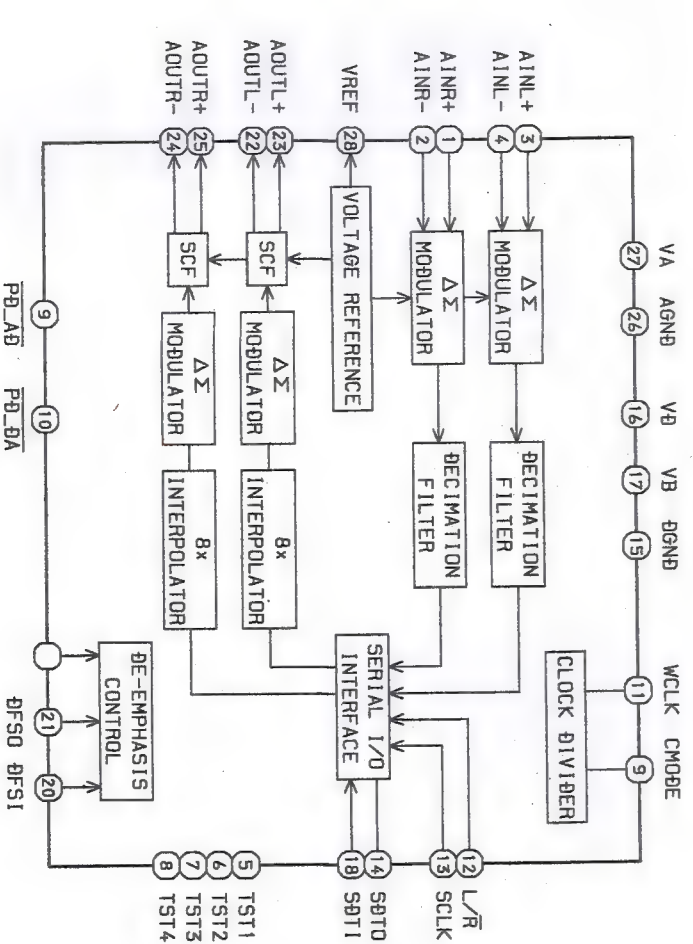
FRONT-SYS C.B





CLOCK DETECTOR				DRIVER											
CLK	PS	OSCILLATOR		PS	OE	INPUT				OUTPUT~3		OUTPUT4			
X	H	AUTOMATIC		PS	OE	FI, F/RT	RI, PI		FO	RO	FO	RO			
10LK	H	SYNCHRONIZE		PS	L	L	L	L	L	L	L	L			
X	L	STOP		H	L	L	H	L	H	L	L	H			
				H	L	H	L	H	L	L	L	L			
				H	L	H	H	X	L	L	H	L			
				H	H	X	X	X	Z	Z	Z	Z			
				L	X	X	X	X	Z	Z	Z	Z			

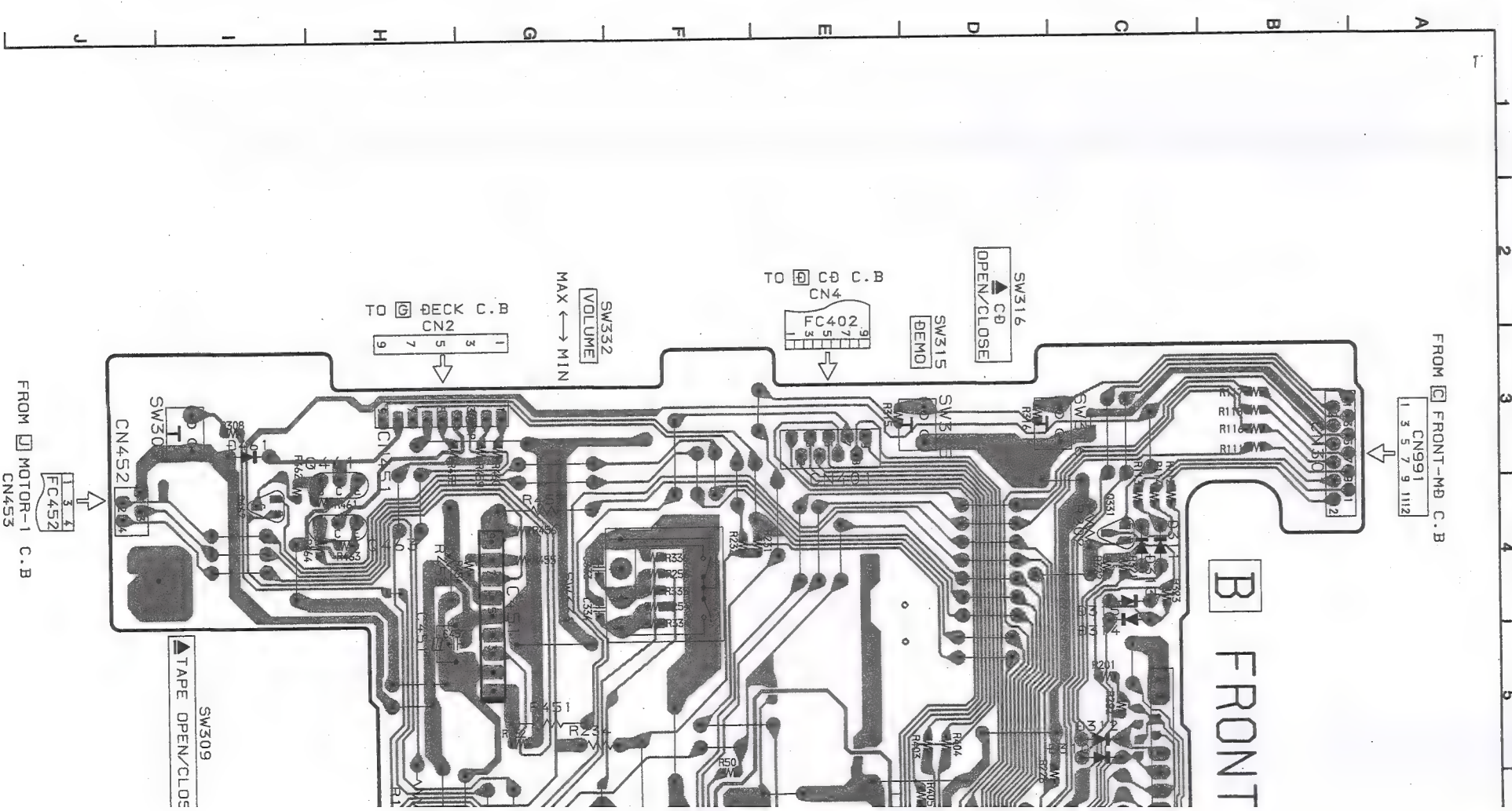
- * Z: HIGH IMPEDANCE
- * PS: STOP ALL CIRCUIT FUNCTION
- * OE: H BRIDGE OUTPUT IS LOW



CONTROL INPUTS			ON SWITCH
INHIBIT	B	A	
L	L	L	Y0 X0
L	L	H	Y1 X1
L	H	L	Y2 X2
L	H	H	Y3 X3
H	X	X	— —

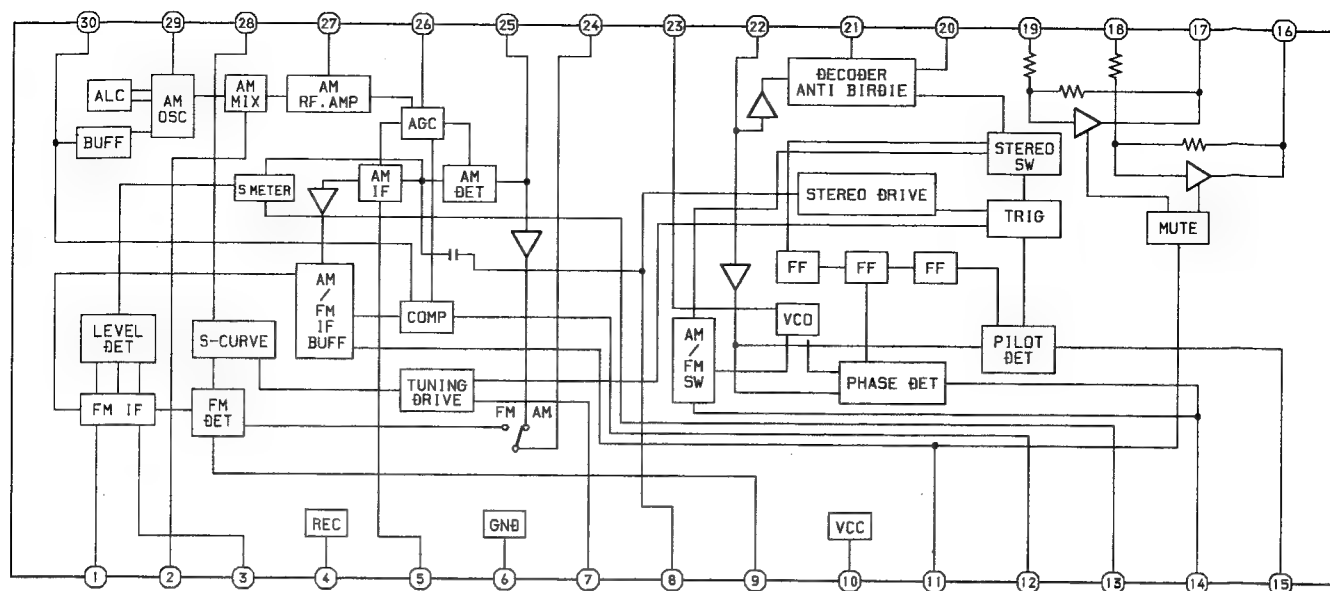
L:LOW LEVEL
H:HIGH LEVEL
H:IRRELEVANT

WIRING - 3 (FRONT-SYS:U)

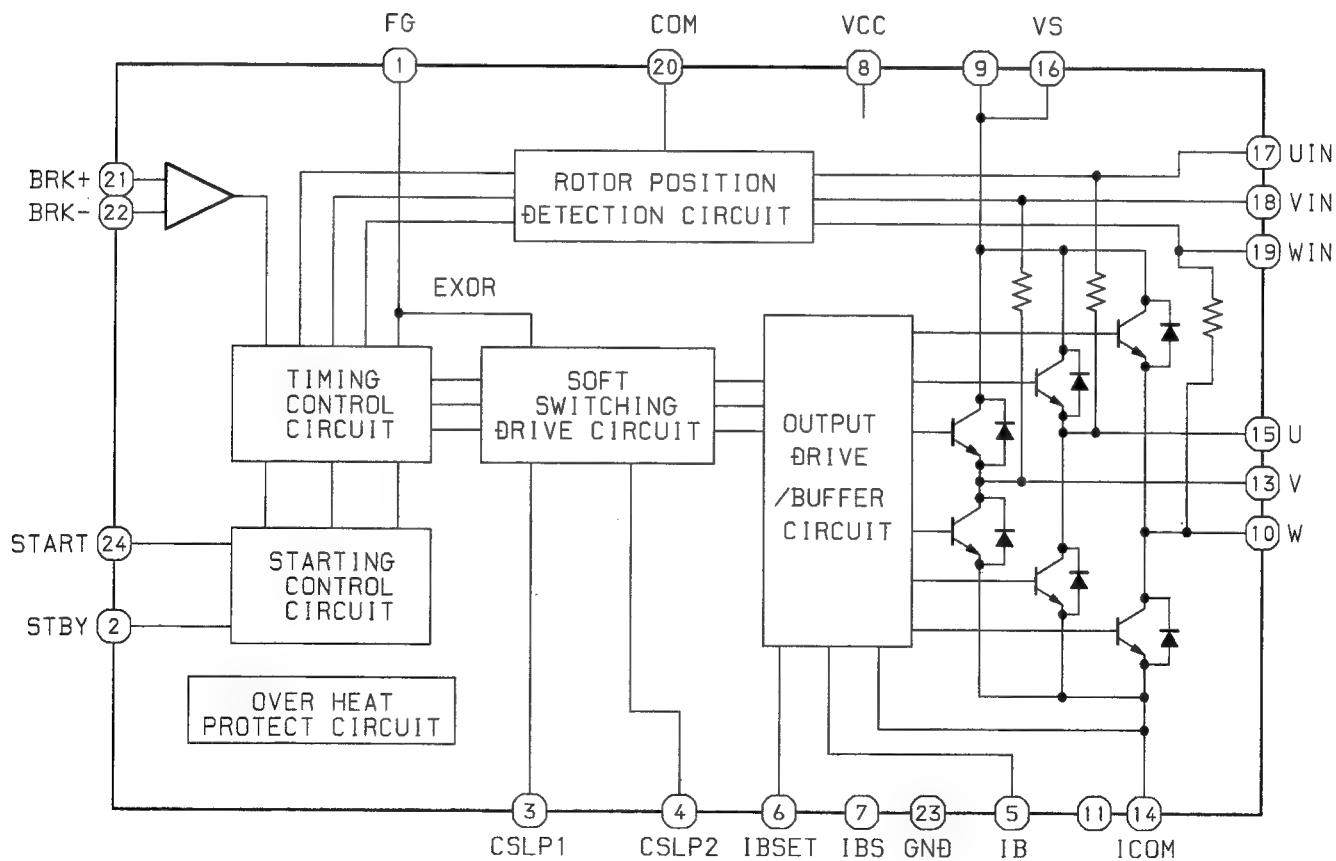


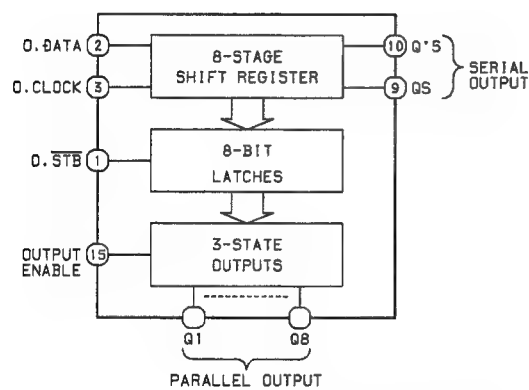
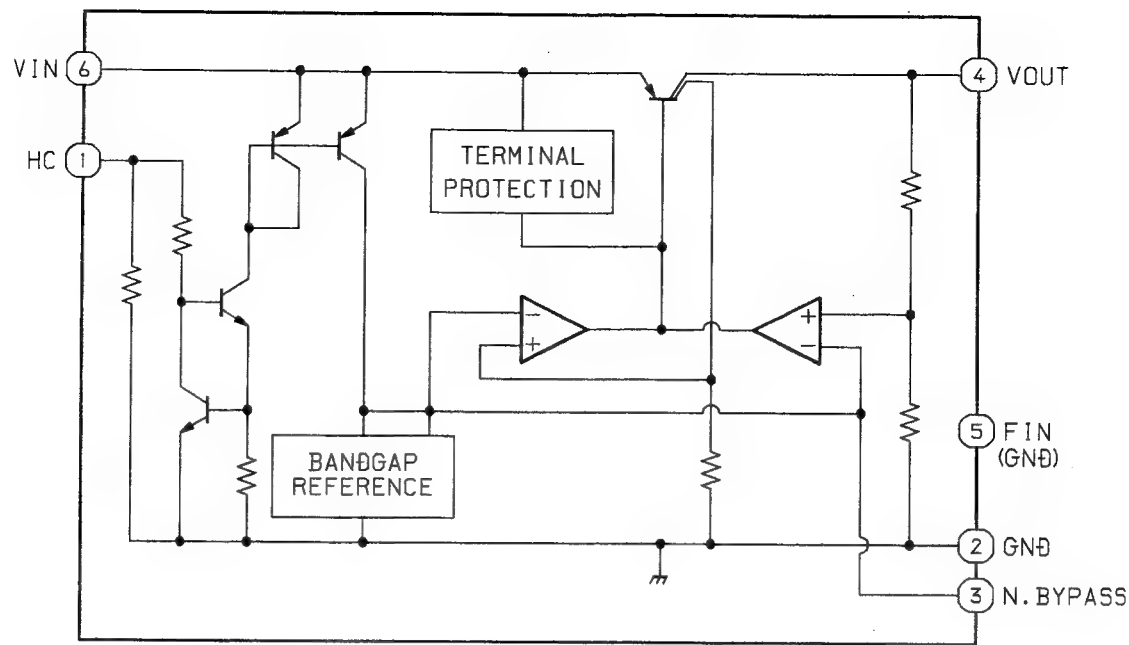


IC BLOCK DIAGRAM – 3 IC, LA1836L



IC, CXA8027N





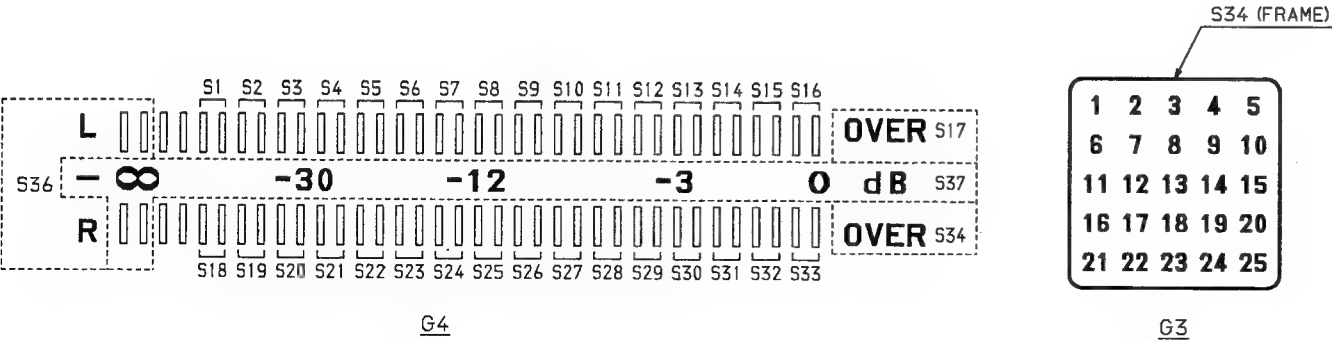
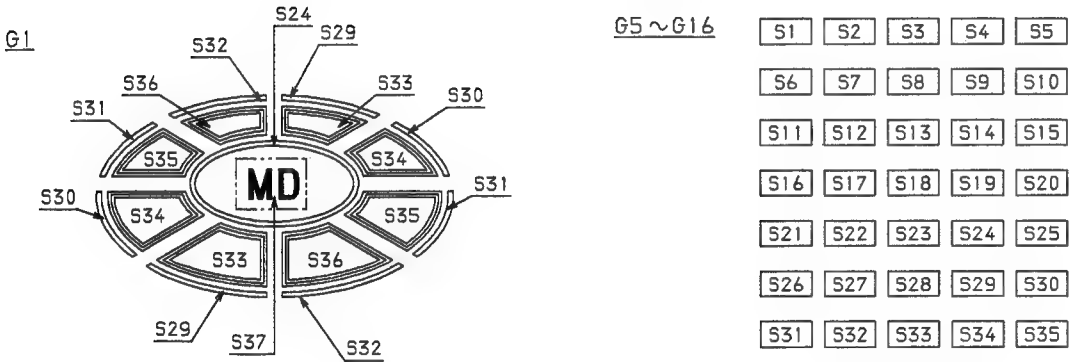
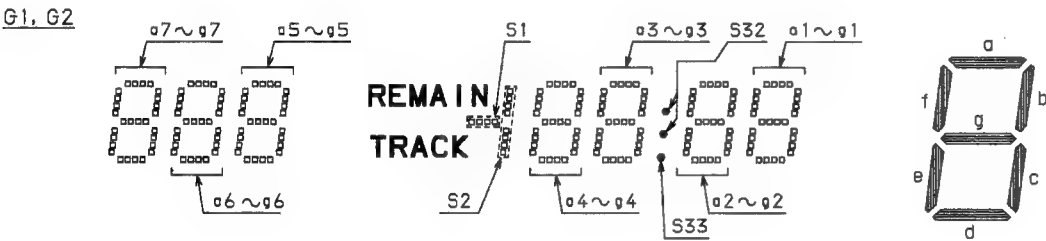
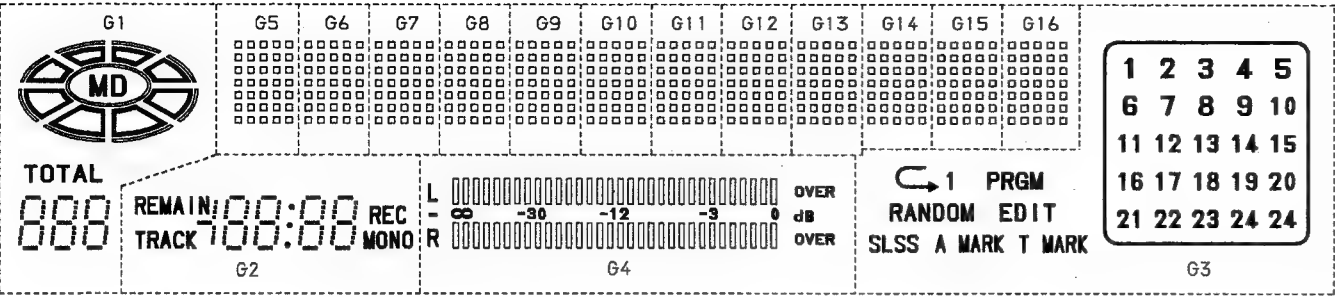
Q1:0. DOLBY DN Q5:0. PLAY
Q2:0. DOLBY C Q6:0. PB2
Q3:0. EXT. REC Q7:0. LE0
Q4:0. INT. REC Q8:0. RMT

TRUTH TABLE

CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Qn	Q5	Q'S
L	L	x	x	Z	Z	Q7	NO CHG.
L	L	x	x	Z	Z	NO CHG.	Q5
L	H	L	x	NO CHG.	NO CHG.	Q7	NO CHG.
L	H	H	L	L	Qn-1	Q7	NO CHG.
L	H	H	H	H	Qn-1	Q7	NO CHG.
L	H	x	x	NO CHG.	NO CHG.	NO CHG.	Q5

Z = HIGH IMPEADANCE
x = DON'T CARE

GRID ASSIGNMENT



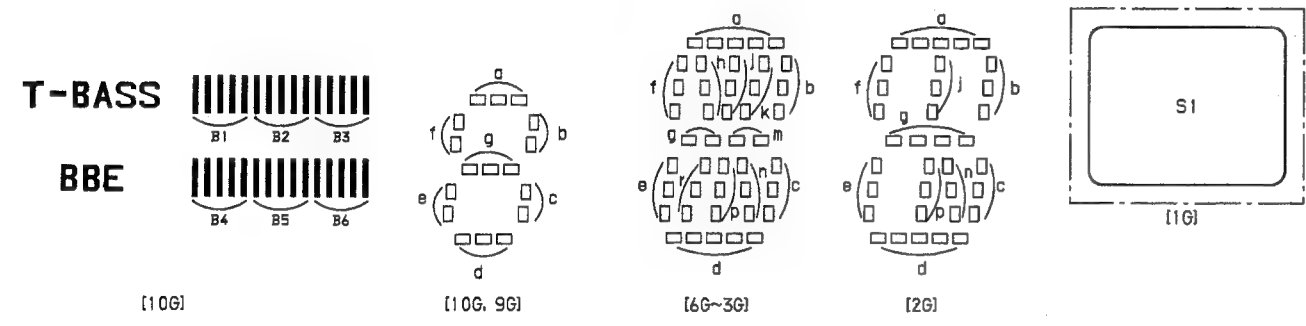
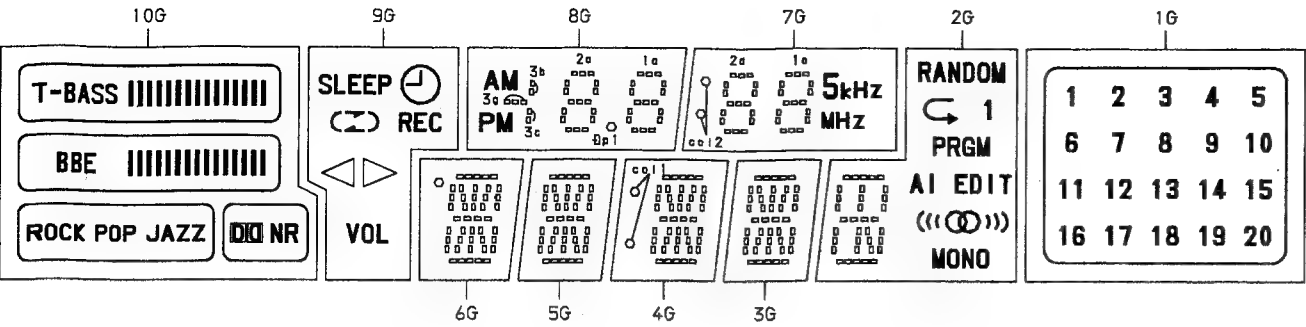
ANODE CONNECTION

	G1	G2	G3	G4	G5~G16
S1	TOTAL	0000	1	S1	S1
S2		1	2	S2	S2
S3	a7	a4	3	S3	S3
S4	b7	b4	4	S4	S4
S5	c7	c4	5	S5	S5
S6	d7	d4	6	S6	S6
S7	e7	e4	7	S7	S7
S8	f7	f4	8	S8	S8
S9	g7	g4	9	S9	S9
S10	a6	a3	10	S10	S10
S11	b6	b3	11	S11	S11
S12	c6	c3	12	S12	S12
S13	d6	d3	13	S13	S13
S14	e6	e3	14	S14	S14
S15	f6	f3	15	S15	S15
S16	g6	g3	16	S16	S16
S17	a5	a2	17	S17	S17
S18	b5	b2	18	S18	S18
S19	c5	c2	19	S19	S19

	G1	G2	G3	G4	G5~G16
S20	a5	a2	20	S20	S20
S21	b5	b2	21	S21	S21
S22	c5	c2	22	S22	S22
S23	d5	d2	23	S23	S23
S24	e5	e2	24	S24	S24
S25	f5	f2	25	S25	S25
S26	g5	g2	26	S26	S26
S27	a4	a1	27	S27	S27
S28	b4	b1	28	S28	S28
S29	c4	c1	29	S29	S29
S30	d4	d1	30	S30	S30
S31	e4	e1	31	S31	S31
S32	f4	f1	32	S32	S32
S33	g4	g1	33	S33	S33
S34	a3	a0	34	S34	S34
S35	b3	b0	35	S35	S35
S36	c3	c0	36	S36	S36
S37	d3	d0	37	S37	S37

FL, BJ508GK (U)

GRID ASSIGNMENT

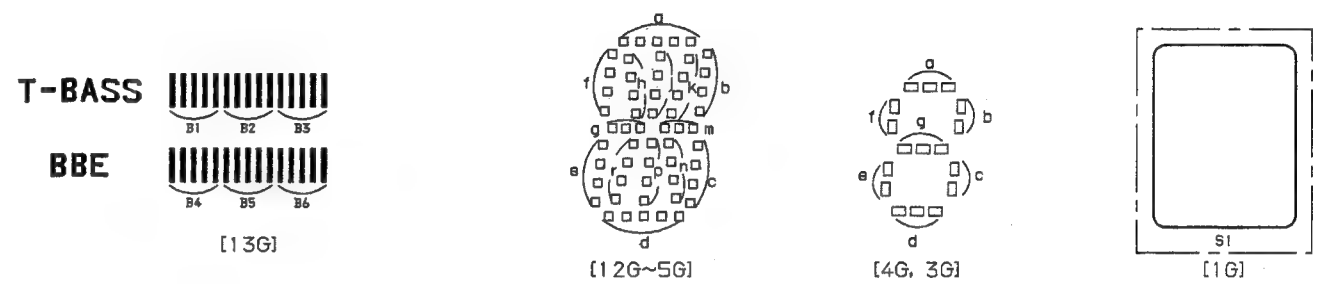
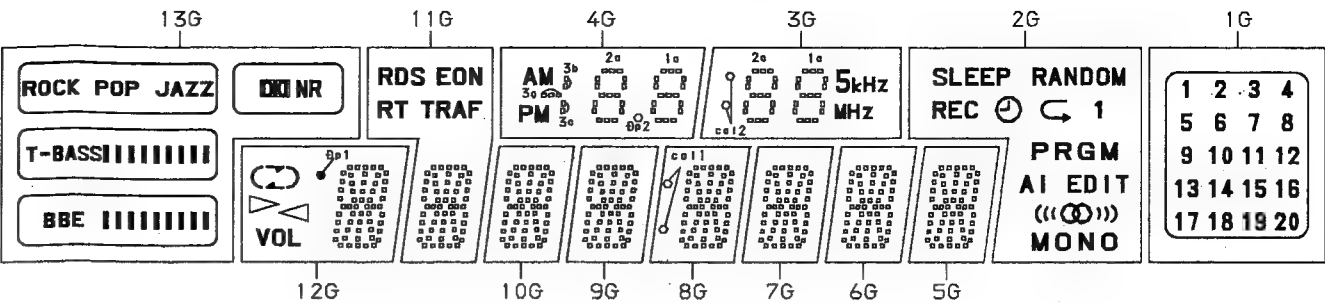


ANODE CONNECTION

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	B1	△	1d	1d	○	—	col 1 (UP)	—	RANDOM	1
P2	B2	△	1e	1e	a	a	a	a	a	2
P3	B3	△	1c	1c	h	h	h	h	1	3
P4	T-BASS	△	1g	1g	j	j	j	j	1	4
P5	(T-BASS)	△	1f	1f	k	k	k	k	PRGM	5
P6	B4	REC	1b	1b	b	b	b	b	b	6
P7	B5	△	1a	1a	f	f	f	f	f	7
P8	B6	SLEEP	2d	2d	m	m	m	m	g	8
P9	BBE	—	2e	2e	g	g	g	g	AI	9
P10	(BBE)	—	2c	2c	c	c	c	c	EDIT	10
P11	ROCK	—	2g	2g	e	e	e	e	e	11
P12	POP	—	2f	2f	r	r	r	r	((O))	12
P13	JAZZ	—	2b	2b	p	p	p	p	MONO	13
P14	(ROCK~JAZZ)	VOL	2a	2a	n	n	n	n	n	14
P15	NR	—	—	—	d	d	d	d	p	15
P16	(NR)	—	△p	col 2 (DOWN)	—	—	col 1 (DOWN)	—	c	16
P17	—	—	PM	col 2 (UP)	—	—	—	—	d	17
P18	—	—	AM	5	—	—	—	—	—	18
P19	—	—	3g	kHz	—	—	—	—	—	19
P20	—	—	3b, 3c	MHz	—	—	—	—	j	20
P21	—	—	—	—	—	—	—	—	—	S1

FL, BJ544GK (EZ)

GRID ASSIGNMENT



ANODE CONNECTION

	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	ROCK	△p1	—	—	—	col 1 (UP)	—	—	—	1d	1d	SLEEP	1
P2	POP	a	a	a	a	a	a	a	a	1e	1e	REC	2
P3	JAZZ	h	h	h	h	h	h	h	h	1c	1c	△	3
P4	(ROCK POP JAZZ)	j	j	j	j	j	j	j	j	1g	1g	RANDOM	4
P5	B1	k	k	k	k	k	k	k	k	1f	1f	△	5
P6	B2	b	b	b	b	b	b	b	b	1b	1b	1	6
P7	B3	f	f	f	f	f	f	f	f	1a	1a	PRGM	7
P8	T-BASS	m	m	m	m	m	m	m	m	2d	2d	AI	8
P9	(T-BASS)	g	g	g	g	g	g	g	g	2e	2e	EDIT	9
P10	B4	c	c	c	c	c	c	c	c	2c	2c	((O))	10
P11	B5	e	e	e	e	e	e	e	e	2g	2g	MONO	11
P12	B6	r	r	r	r	r	r	r	r	2f	2f	—	12
P13	BBE	p	p	p	p	p	p	p	p	2b	2b	—	13
P14	(BBE)	n	n	n	n	n	n	n	n	2a	2a	—	14
P15	NR	d	d	d	d	d	d	d	d	—	—	—	15
P16	(NR)	△	RDS	—	—	col 1 (DOWN)	—	—	—	△p2	col 2 (DOWN)	—	16
P17	—	△	EON	—	—	—	—	—	—	AM	col 2 (UP)	—	17
P18	—	△	RT	—	—	—	—	—	—	PM	5	—	18
P19	—	△	TRAF	—	—	—	—	—	—	3g	kHz	—	19
P20	—	△	—	—	—	—	—	—	—	3b, 3c	MHz	—	20
P21	—	VOL	—	—	—	—	—	—	—	—	—	—	S1

IC DESCRIPTION
IC, LA9240M

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Connected to pickup photo-diode. Positive setting by FIN2 pin generates RF signal, and negative setting does FE signal.
2	FIN1	I	Connected to pickup photo-diode.
3	E	I	Connected to pickup photo-diode.Negative setting by FIN1 pin generates TE signal.
4	F	I	Connected to pickup photo-diode.
5	TB	I	Input DC constituent parts of TE signal.
6	TE-	O	Connected to TE pin with resistor set TE signal gain.
7	TE	O	Output TE signal.
8	TESI	I	Input TES (TRACK ERROR SENCE) comparator. Band pass and input TE signal.
9	SCI	I	Input shock detection.
10	TH	I	Establish tracking gain value.
11	TA	O	TA amplifier output.
12	TD-	I	Compose tracking phase compensation value between TD and VR pins.
13	TD	O	Used for tracking phase compensation setting.
14	JP	I	Establish amplitude of tracking jump signal (kick pulse).
15	TO	O	Output tracking control signal.
16	FD	O	Output focusing control signal.
17	FD-	I	Compose focusing phase compensation value between FD and FA pins.
18	FA	O	Compose focusing phase compensation value between FD- and FA- pins.
19	FA-	I	Compose focusing phase compensation value between FA and FE pins.
20	FE	O	Output FE signal.
21	FE-	I	Connected to TE pin with resistor set FE signal gain.
22	AGND	—	Analog GND.
23	SP	O	Output single-end for CV+ and CV- pins input signal.
24	SPI	I	Spindle amplifier input.
25	SPG	I	Connect resistor for gain setting at spindle 12cm mode.
26	SP-	I	Connect spindle phase compensation value with SPD pin.
27	SPD	O	Output spindle control signal.
28	SLEQ	I	Connect sled phase compensation value.
29	SLD	O	Output sled control signal.
30	SL-	I	Input sled sending signal from microcomputer.
31	SL+		
32	JP-		
33	JP+	I	Input tracking jump signal from DSP.
34	TGL	I	Input tracking gain control signal from DSP. TGL = "H" : gain low.
35	TOFF	I	Input tracking off control signal from DSP. TOFF = "H" : off.
36	TES	O	Output TES signal to DSP.
37	HFL	O	HIGH FREQUENCY LEVEL: detects whether main-beam is on bit or mirror position.
38	SLOF	I	Input sled serbo off control.
39	CLV-	I	Input CLV error signal from DSP.
40	CLV+		
41	RFSM	O	Output RF.
42	RFS-	O	Establish RF gain and 3T compensation value from EFM signal with RFSM pin.
43	SLC	O	SLICE LEVEL CONTROL: control data slice level by DSP with RF wave form.
44	SLI	I	Control data slice level by DSP.
45	DGND	—	Digital GND.
46	FSC	O	Connected to focus search smoothing capacitor.
47	TBC	I	TRACKING BALANCE CONTROL: establish EF balance variable range.
48	NC	—	Not used.

Pin No.	Pin Name	I/O	Description
49	DEF	O	Output disk defect detection.
50	CLK	I	Input reference clock. Inputs 4.23 MHz from DSP.
51	CL	I	Input microcomputer command clock.
52	DAT	I	Input microcomputer command data.
53	CE	I	Input microcomputer command chip enables.
54	DRF	O	DETECT RF: Output RF level detection.
55	FSS	I	FOCUS SEARCH SELECT: switches focus search mode (between ± search and ± search against reference voltage).
56	VCC2	—	Servo/digital VCC.
57	REF1	—	Connected to reference voltage by pass condenser.
58	VR	O	Output reference voltage.
59	LF2	—	Establish value in detecting disc defect.
60	PH1	—	Connected to capacitor used to hold peak of RF signal.
61	BH1	—	Connected to capacitor used to hold bottom of RF signal.
62	LDD	O	APC-circuit output pin.
63	LDS	I	APC-circuit input pin.
64	VCC1	—	RF VCC.

Pin No.	Pin Name	I/O	Description
1	DEFI	I	Defect detection signal (DEF) input terminal.
2	TAI	I	PLL test input terminal. Internal pull-down resistance attached. Connected to 0V.
3	PDO	O	Phase comparing output terminal to control external VCO for PLL.
4	VVSS	—	Connected to internal VCO of PLL. Connected to 0V.
5	ISET	I	Connected to resistor adjusted PDO output current for PLL.
6	VVDD	—	Voltage terminal for internal VCO of PLL.
7	FR	I	Adjusts VCO frequency range for PLL.
8	VSS	—	Digital GND. Connected to 0V.
9	EFMO	O	Output EFM signal for slice level control.
10	EFMIN	I	Input EFM signal for slice level control.
11	TEST2	I	Test input terminal. Internal pull-down resistance attached. Connected to 0V terminal.
12	CLV+	O	Output disk motor control. Tristate output.
13	CLV-		
14	V/-P	O	Automatic switching monitor output for rough servo/phase control. When "H", output rough servo, when "L", output phase control.
15	HFL	I	Input track detection signal. Schumit-trigger input.
16	TES	I	Input tracking error signal. Schumit-trigger input.
17	TOFF	O	Output tracking OFF.
18	TGL	O	Output tracking gain switching. When "H", gain is raised.
19	JP+	O	Output track jump control. Tristate output.
20	JP-		
21	PCK	O	Clock monitor terminal for playback EFM data. 4.3218MHz at phase locked.
22	FSEQ	O	Output detection of synchronized signal. "Hi": when a synchronization signal from EFM signal is coincident with the internally generated.
23	VDD	—	Supply digital voltage.
24~28	CONT1~CONT5	I/O	Common input/output terminal 1~5. Controlled by serial data command from microcomputer.
29	EMPH	O	De-emphasis monitor terminal. "H" when playing de-emphasis disk.
30	C2F	O	C2 fragment output terminal.
31	DOUT	O	Digital OUT output terminal (EIAJ format).
32 & 33	TEST3, TEST4	I/O	Test input terminal. Internal pull-down resistance attached. Connected to 0V terminal.
34	NC	—	Not used.
35	MUTEL	O	L channel 1 bit DAC. Mute output terminal for L channel.
36	LVDD	—	L channel 1 bit DAC. Voltage terminal for L channel.
37	LCHO	O	L channel 1 bit DAC. Output terminal for L channel.
38	LVSS	—	L channel 1 bit DAC. Connected to L channel. Connected to 0V.
39	RVSS	—	R channel 1 bit DAC. Connector terminal for R channel. Connected to 0V.
40	RCHO	O	R channel 1 bit DAC. Output terminal for R channel.
41	RVDD	—	R channel 1 bit DAC. Power terminal for R channel.
42	MUTER	O	R channel 1 bit DAC. Mute output terminal for R channel.
43	XVDD	—	Power supply terminal for crystal oscillator.
44	XOUT	O	Connected to crystal oscillator 16.9344 MHz.
45	XIN	I	
46	XVSS	—	Connected to 0V. Connected to ground for crystal oscillator.
47	SBSY	O	Output synchronization signal of sub code block.
48	EFLG	O	Monitor terminal for C1, C2, single, or double correction.
49	PW	O	Output terminal for sub-codes: P, Q, R, S, T, U, W.

Pin No.	Pin Name	I/O	Description
50	SFSY	O	Output sub-code-frame synchronization signal. Sub code is down when standby.
51	SBCK	I	Input sub-code reading clock. Schumit-trigger input.
52	FSX	O	Output 7.35kHz synchronization signal generated from crystal oscillator.
53	WRQ	O	Output stand-by for sub-code Q output.
54	RWC	I	Read/write control input. Schumit-trigger input.
55	SQOUT	O	Output sub-code Q.
56	COIN	I	Input command from microcomputer.
57	CQCK	I	Input clock to adopt command input or to recall sub-codes from SQOUT.
58	RES	I	Reset terminal for LC78622. Set to "L" whenever power is on.
59	TST11	O	Test output terminal. Open setting (general setting: "L" output) when used.
60	16M	O	16.9344MHz output terminal.
61	4.2M	O	4.2336MHz output terminal.
62	TEST5	I	Test input terminal. Internal pull-down resistance attached. Connected to 0V.
63	CS	I	Chip-select input terminal. Internal pull-down resistance attached.
64	TEST1	I	Test input terminal. No pull-down resistance attached. Connected to 0V.

IC DESCRIPTION
IC, LC 866432V-5D27 <U>

Pin No.	Pin Name	I/O	Description
1	O-CE	O	Connected to TUNNER PLL IC LC72131 Pin 3.
2	O-FS/STB	O	Connected to FRONT SHIFT REGISTER BU2092 Pin 4 (FS-STB).
3	O-M/STB	O	Connected to MAIN SHIFT REGISTER BU4094 Pin 1 (STB) and BH3854 Pin 18 (LATCH).
4	O-DATA	O	Connected to SHIFT REGISTER BU4094 Pin 2, BU2092 Pin 2, BH3854 DATA, and LC72131 Pin 4 (DI).
5	O-CLK	O	Connected to SHIFT REGISTER BU2092 Pin 3, BU4094 Pin 3 (CLK), PLL IC LC72131 Pin 5 (CL) and BH3854 Pin 20 (CK).
6	O-CKSFT/L	O	System micron clock shift output.
7	RESET	-	Micron reset.
8	I-STEREO	I	Detect TUNNER STEREO status.
9	I-TUNE/IFC	I	Connected to TUNNER PLL IC LC72131 Pin 6 (DO).
10	VSS	-	GND.
11, 12	CF1, CF2	-	Connected to 6MHz oscillator terminal.
13	VDD1	-	Micron supply (+5V).
14	I-KEY0	I	Input KEY signal (A/D value).
15	I-KEY	I	Input KEY signal (A/D value).
16	I-ENC1	I	Input ENCODER (MULTI JOG) signal (A/D value).
17	I-ENC2	I	Input ENCODER (VOL) signal (A/D value).
18	I-CDSW	I	Detect CD DOOR status.
19	I-DMSW	I	Detect TAPE DOOR status.
20	I-DSW	I	Detect DECK REC status.
21	I-MS	I	Input DECK music sensor.
22	I-TM/BASE	I	Input reference clock for timer.
23	I-HOLD	I	Power failure detect input.
24	I-RMC	I	System Remote control input.
25~30	T0~T5	O	FL grid output.
31~34	T6~T9	O	FL grid output.
35~40	S10~S15	O	FL grid output.
41	VDD2	-	System supply (+5V).
42	VP	-	Power supply input for FL display.
43~50	S16~S23	I/O	FL tube anode output and INITIAL input.
51~56	S24~S29	I/O	FL tube anode output and INITIAL input.
57~58	PD6, PD7	O	REC-STANDBY : Record standby condition. NO-REC : Record stop. LD-SW : Disc detection.
59	O-CKSFT/M	O	MD system micron clock shift output.
60	O-CD CLOSE	O	Output CD DOOR CLOSE control.
61	O-CD OPEN	O	Output CD DOOR OPEN control.
62	O-TA CLOSE	O	Output TAPE TRAY CLOSE control.

Pin No.	Pin Name	I/O	Description
63	O-TA OPEN	O	Output TAPE TRAY OPEN control.
64	O-KEY/SCAN	O	Detect INITIAL DIODE MATRIX timing.
65	O-POWER	O	Power supply control output.
66	O-MOTOR	O	Output DECK motor-power supply control.
67	O-PL	O	DECK plunger control output.
68	O-FM/STB	O	Connected to SHIFT REGISTOR BU2092 Pin 4 (FM-STB) for MD KEY.
69	I-STOP	I	Input DECK stop pulse.
70	I-AS	I	Input DECK auto pulse.
71	I-LPLAY	I	Input MD PLAY LED.
72	I-LPAUSE	I	Input MD PAUSE LED.
73	VSS2	-	GND.
74	O-COIN	O	Output CD command-data.
75	I-SQOUT	I	Sub-code Q input.
76	O-CQCK	O	Output CD command clock.
77	O-RWC	O	Output CD read / write control.
78	I-WRQ	I	Input standby for CD sub-code Q output.
79	I-DRF	I	Detect CD RF level.
80	O-MUTE	O	Mute output.

IC, LC866448W-5E62 <EZ>

Below indicate the difference of Pin No., Pin Name, Description of IC, LC866432V-5D27 <U> and IC, LC866448W-5E62 <EZ>.

Pin No.	Pin Name	I/O	Description
19	I-SIG	I	Tuner signal strength.
22	I-RD/CLK	I	CLK from RDS IC.
59	I-LPLAY/S32	I	MD PLAY LED input.
60	I-LPAUSE/S33	I	MD PAUSE LED input.
71	I-TM/BASE	I	Input reference clock for timer.
72	I-RD/DATA	I	Data from RDS IC.

IC, BU2092 (FRONT-SYS C.B)

Pin No.	Pin Name	I/O	Description
1	VSS	-	GND.
2	DATA	I	Serial data input.
3	CLK	I	Data is shifted serially through the shift register on the positive transition of the CLOCK.
4	FS-STB	O	FRONT REGISTER Strobe output.
5	TAPE	O	TAPE LED ON/OFF output.
6	TUNNER	O	TUNNER LED ON/OFF output.
7	AUX	O	AUX LED ON/OFF output.
8	CD	O	CD LED ON/OFF output.
9	MD	O	MD LED ON/OFF output.
10	REW	O	REW LED ON/OFF output.
11	PLAY	O	PLAY LED ON/OFF output.
12	FF	O	FF LED ON/OFF output.
13	PAUSE	O	PAUSE LED ON/OFF output.
14	STOP	O	STOP LED ON/OFF output.
15	REC	O	REC LED ON/OFF output.
16	Q11	O	Data output.
17	OE	I	Output enable (output FET "H" level is OFF).
18	VDD	-	Power supply.

IC, BU2092 (FRONT-MD C.B)

Pin No.	Pin Name	I/O	Description
1	VSS	-	GND.
2	DATA	I	Serial data input.
3	CLK	I	Data is shifted serially through the shift register on the positive transition of the CLOCK.
4	FS-STB	I	FRONT REGISTER Strobe output.
5	MD	O	Output "H" at MD function.
6	EJECT	O	Output MD eject open.
7	MD-CONT	O	Key switching output at MD function. MD POWER ON at "L".
8	REW	O	Key switching output at MD function. MD REW at "L".
9	FF	O	Key switching output at MD function. MD FF at "L".
10	REC	O	Key switching output at MD function. MD REC at "L".
11	PAUSE	O	Key switching output at MD function. MD PAUSE at "L".
12	PLAY	O	Key switching output at MD function. MD PLAY at "L".
13	STOP	O	Key switching output at MD function. MD STOP at "L".
14	DIG/ANA	O	MD, REC, DIGITAL/ANALOG switching output. DIGITAL at "H".
15	LED CONT	-	MD function SW control.
16	POWER OK	I	System supply control input.
17	OE	I	Output enable (output FET "H" level is OFF).
18	VDD	-	Power supply.

IC, M38198MC-093FP

Pin No.	Pin Name	I/O	Description
1 , 2	KEY 0, 1	I	Key input 0,1 (AD).
3	LDSW	I	Loading control : LOAD SW input.
4	PBSW	I	Loading control : PB SW input.
5	RECSW	I	Loading control : REC SW input.
6	LOAD	O	Loading control : Motor output 1.
7	EJECT	O	Loading control : Motor output 2.
8	DIG/ANA	I	Digital REC/analog REC switching input.
9	NO-NC	I	Input recording prohibition.
10	SLOW	O	Loading control : Motor speed SLOW output.
11	LLATCH	O	AINAVI : Latch output.
12	LDATE	O	AINAVI : Data output.
13	LCLK	O	AINAVI : Clock output.
14 , 15	ENC-A, B	I	Rotary encoder A,B phase input.
16	RCLK	O	Electronic VR : clock. (Not used)
17	RDT	O	Electronic VR : data. (Not used)
18	REC STANDBY	I	Recording standby OK status input.
19	ARDY	O	MAIN CPU Handshake: Data ready output.
20	ACLK	I	MAIN CPU Handshake: Clock input.
21	SOUT	O	MAIN CPU Handshake: Serial data output (LSB FIRST).
22	SIN	I	MAIN CPU Handshake: Serial Data input (LSB FIRST)
23	SOFT A/B	–	System set micro-P mode when H.
24	SREQ	O	MAIN CPU Handshake: Transmission request output.
25	POWER OK	I	Power supply control with system.
26	NC	–	Connected to GND.
27 , 28	NC	–	Not used.
29	NC	–	Pull up through the resistor.
30	MREQ	I	MAIN CPU Handshake : Recieve signal request input.
31	NC	–	Not used.
32	REMOTE	I	Infrared ray remote control input.
33	TEST	I	Test mode input. Turning on power with “L” starts the TEST MODE.
34	ACOFF	I	AC power failure detection input. Power failure is determined with “L”.
35	RESET	I	Reset input.
36 , 37	NC	–	Not used.
38	OSCI	I	Connected the 7.68 MHz ceramic oscillator.
39	OSCO	O	Connected the 7.68 MHz ceramic oscillator.
40	GND	–	CPU DIGITAL GND.
41	SRST	O	MAIN CPU RESET control output. RESET when “L”.
42	START	O	MAIN CPU HOT START control output. RESTART when “L”.
43	SEG37 (FLSW)	O	FL segment output. (Ever-illuminated Fl segment control output.)
44	MODE	I	MODE input (only during initialization).

Pin No.	Pin Name	I/O	Description
45 ~ 60	GRID 0 ~ 15	O	FL digit output.
61 ~ 90	SEG 35 ~ 6	O	FL digit output.
91	VCC	I	Input 4.2-4.7V.
92 ~ 97	SEG 5 ~ 0	O	FL segment output.
98	VEE	I	Vdd-38V (-33.0V).
99	AVSS	–	CPU ANALOG GND.
100	AVREF	I	Input 4.2-4.7V.

IC, CXA1981Q/AR

Pin No.	Pin Name	I/O	Description
1	VC	O	Voltage output terminal of VCC/2.
2	A	I	Current input terminal of main beam servo signal A.
3	B	I	Current input terminal of main beam servo signal B.
4	C	I	Current input terminal of main beam servo signal C.
5	D	I	Current input terminal of main beam servo signal D.
6	E	I	Current input terminal of main beam servo signal E.
7	F	I	Current input terminal of main beam servo signal F.
8	F1	I	EF balance adjustment terminal.
9	FO	O	EF balance adjustment terminal.
10	PD	I	Quantity of light monitor signal input terminal.
11	APCREF	I	Laser power setup reference voltage output terminal.
12	TEMP1	I	Temperature sensor output terminal.
13	GND	–	Ground terminal.
14	AAPC	O	Output terminal of APC.
15	TST0	O	Test terminal. Set in open. (Not used)
16	TEMPR	O	Temperature sensor-type reference voltage output terminal.
17	TST1	–	Test terminal. Connect to VCC.
18	SWDT	I	Data input terminal of microprocessor's serial interface.
19	SCLK	I	Shiftlock input terminal of microprocessor's serial interface.
20	XLAT	I	Latch input terminal of microprocessor's serial interface. Latch when "L".
			External clock/crystal oscillator input 1.
21	VREF	O	Reference voltage output terminal. (Not used)
22	TST2	–	Test terminal. Set in open. (Not used)
23	TST3	–	Test terminal. Set in open. (Not used)
24	VCC	–	Power terminal.
25	TST4	–	Test terminal. Connect to VC.
26	TE	O	Tracking error signal output terminal.
27	TLB	–	Tracking error signal low booster-type capacitor connection terminal.

Pin No.	Pin Name	I/O	Description
28	CSLED	–	Sled error signal LPF capacitor connection terminal.
29	SE	O	Sled error signal output terminal.
30	ADFM	O	FM signal output terminal of ADIP.
31	ADIN	I	ADIP signal comparator input terminal.
32	ADAGC	–	ADIPAGC capacitor connection terminal.
33	ADFG	O	ADIP binary output terminal.
34	AUX	O	I3 output/ temperature signal output terminal.
35	FE	O	Focus error signal output terminal.
36	FLB	–	Focus error signal low booster-type capacitor connection terminal.
37	ABCD	O	Quantity of light signal output terminal of the main beam servo detector.
38	BOTM	O	Signal output terminal of RF/ABCD's bottom.
39	PEAK	O	Signal output terminal of RF/ABCD's peak.
40	RFAGC	–	RFAGC capacitor connection terminal.

Pin No.	Pin Name	I/O	Description
1 ~ 8	NC	–	Not used.
9	DISCPRO	I	DISC PROTECT SW input.
10	RFLCT	I	DISC REFLECT SW input.
11	B-CAS	O	DRAM self-refresh control output. (Not used)
12	LS	I	PICK UP innermost periphery SW input.
13 , 14	NC	–	Not used.
15	V-FLAG	I	Sub code V plug input while digital IN. (Not used)
16 , 17	NC	–	Not used.
18	ACOFF	I	Power failure detection input. Fixed H.
19	S-REQ	I	Serial interface: Sub interrupt request signal.
20	START	I	Hot start-type input. Fixed H.
21	B-RAS	O	D-RAM self-refresh control. (Not used)
22 , 23	NC	–	Not used.
24	M-REQ	O	Serial interface: MD microprocessor interrupt request signal.
25	DRIVE	O	Recording current control. “L” when recording.
26 ~ 28	NC	–	Not used.
29	DAPON	O	DA converter ON/OFF control. H: ON. (Not used)
30	DMUTE	–	Open drain. (Not used)
31	REC	O	Recording circuit-type power ON/OFF control. H: ON Open drain. (Not used)
32	AMUTE	O	Analog mute. H: MUTE.
33 ~ 36	NC	–	Not used.
37	MP	I	Connected to GND.
38	SRST	I	Receive the system microprocessor’s P-CON, the MD microprocessor starts up. (Reset terminal)
39	DGND	–	Connected to GND.
40	XTALO	O	Connect to 12 MHz ceramic oscillator.
41	XTALI	I	
42	ARDY	I	Serial interface : Ready signal.
43	SIN	I	Serial interface : SI signal.
44	SOUT	O	Serial interface : SO signal.
45	ACLK	O	Serial interface : Clock signal.
46	XLAT	O	Serial data strobe output.
47	XRST0	O	RESET signal to CXD 2533BR/CXA1981. Reset when “L”.
48	XRST1	O	Reset signal to CXD 2536. Reset when “L”.
49	NC	–	Not used.
50	AVSS	–	Connected to GND.
51	AVREF	–	Connected to power.
52	AVDD	–	
53 ~ 56	NC	–	Not used. (PULL UP)
57 ~ 59	NC	–	Not used. (connected to GND)
60	NC	–	Not used. (PULL UP)

Pin No.	Pin Name	I/O	Description
61	COUT	I	Track jump count input.
62	SP-FG	I	Spindle FG input.
63	SHCK	I	Shock detection input.
64	FOK	I	FOK input. FOCUS ON with “H”.
65	GFS	I	Guard frame sync input. Frame sync is OK when “H” .
66	SENS	I	CXD2535 internal status monitor input.
67	NC	–	Not used. (Connected to GND)
68	CS	I	Serial data strobe input.
69	NC	–	Not used.
70	EXTVCO	O	VCO ON/OFF control. ON with “L”. (Not used)
71	P-CONT	O	DSP power control. Drop DSP/RF/MOTOR’s power with “L”.
72	RFSW	–	Not used.
73 , 74	NC	–	
75	DQSY	I	Digital recording-type Sub Q sync input.
76	XINT	I	Interrupt request input form CXD2536R. Interrupt with “L”.
77	SRDT	I	CXD2536R Serial data.
78	SWDT	O	CXD2536R/CXA1981A Serial data.
79	SCLK	O	SRDT/SWDT Serial lock.
80	SQSY	O	EFM Sub code Q sync/ADIP sync.
81 ~ 83	NC	–	Not used.
84	NC	–	Not used. (clock does not support) Connected to GND.
85	NC	–	Not used. (clock does not support)
86	VSS	–	Connected to GND.
87 , 88	VDD	–	Connected to power.
89	SHCKEN	O	Shock detection request output.
90	WRPWR	O	Laser power control to CXD2535BR. Recording power with “H”.
91	DIRC	O	Track jump control.
92 , 93	SMD0 , SMD1	O	CXD2536R serial data control mode.
94	RCPB	O	CXD2536R recording/playback control. Recording mode with “H”.
95	WRMN	O	ATRAC encode and external RAM write control.
96	TX	O	CXD2536R recording data enable control. Permissible with “H”.
97	MOD	O	Laser diode high frequency weight control.
98	OPMUTE	O	Laser diode control. ON with “H”.
99	ADPON	O	AC CONVERTOR power control. ON with “H”. (Not used)
100	EMPH	O	AC CONVERTOR emphasis control. ON with “L”.

Pin No.	Pin Name	I/O	Description
1	FS256	O	Power terminal.
2	FOK	O	256Fs output (11.2896MHz).
3	DFCT	O	Defect detection output.
4	SHCK	O	Latch input of microprocessor serial interface. Latch with start up.
5	SHCKEN	I	Track jump detection output.
6	WRPWR	I	Laser power switch input. When “H”, recording power. When “L”, playback power.
7	DIRC	I	Track jump control signal.
8	SWDT	I	Data input of microprocessor serial interface.
9	SCLK	I	Shiftlock input of microprocessor serial interface.
10	XLT	I	Latch input of microprocessor serial interface. Latch with start up.
11	SRDT	O	Data output of microprocessor serial interface.
12	SENS	O	Terminal that outputs the internal status in response to the address of microprocessor serial interface.
13	ADSY	O	ADIP sync output. (Not used)
14	SQSY	O	DISC sub code Q sync/ ADIP sync output.
15	DQSY	O	Ubit CD or MD format sub code Q sync output, When the source of digital in is CD or MD.
16	XRST0	I	Reset input. When “L” reset.
17	TEST4	I	Test terminal. Connected to GND.
18	CLVCK	O	Spindle servo evaluation-type clock output (5.6448MHz). (Not used)
19	TEST5	I	Test terminal. Connected to GND.
20	DOUT	O	Digital Audio interface signal output.
21	DIN	I	Digital Audio interface signal input.
22	FMCK	O	ADIP FM recovery clock output. (Not used)
23	ATER	O	ADIP CRC flag output. When “H”, error. (Not used)
24	REC	I	Recording/Playback’s changeover. When “H”, recording; when “L”, playback.
25	DVSS	–	Digital GND.
26	DOVF	I	Volt input of output signals from the DOUT terminal. Connected to GND.
27	DODT	I	Output signals from the DOUT terminal and peak detection-type audio data input.
28	DIDT	O	Audio data output of signals input from the DIN terminal.
29	DTI	I	Recording data input from the CXD2536A.
30	DTO	O	Playback data output to the CXD2536A, when in playback. When recording, “Z”. (Not used)
31	C2OP	O	Output of playback data C2 pointer, when in playback. When Digital Rec., output of digital in’s volt. When Analog Rec., “L”.
32	BCK	O	64Fs output (2.8224MHz.)
33	LRCK	O	Fs output (44.1kHz).
34	XTAO	O	Crystal oscillating circuit output terminal (XTA terminal’s reverse output). (Not used)
35	XTAI	I	Crystal oscillating circuit input terminal (512Fs=22.5792MHz).
36	MCLK	O	Master clock output (512Fs=22.5792MHz). (Not used)
37	XBCK	O	BCK reverse output. (Not used)

Pin No.	Pin Name	I/O	Description
38	DVDD	O	Digital power supply.
39	WDCK	O	2Fs output (88.2KHz). (Not used)
40	REFCK	O	Read Frame Clock output. (Not used)
41	WFCK	O	White Frame Clock output. (Not used)
42	GTOP	O	Frame sync safeguard window activation mode monitor. The frame sync safeguard window is released, when “H”. (Not used)
43	GFS	O	Frame sync is OK, when in “H”.
44	XPLCK	O	EMF decoder PLL clock output (98Fs=4.3218MHz). (Not used)
45	EFMO	O	“L” when playback. EFM (encode data) output, when recording .
46	RAOF	O	RAM overflow output, when playback. (Not used)
47	MVCI	I	Control voltage input of the Digital In PLL-type externally connected VCO.
48	TEST2	I	Test terminal. Connected to GND.
49	DIPD	O	Digital in PLL phase comparison output.
50	DVSS	–	Digital GND.
51	DICV	I	Control voltage input of the Digital In PLL-type internal VCO.
52	DIFI	I	Digital In PLL-type internal VCO usage filter input.
53	DIFO	O	Digital In PLL-type internal VCO usage filter output.
54	AVDD	–	Analog power supply.
55	ASYO	O	Playback EFM full swing output (“L” = VSS, “H” =VDD).
56	ASYI	I	Playback EFM Comparator slice voltage input.
57	BIAS	I	Playback Comparator slice current input.
58	RFI	I	Playback EFM’s RF signal input.
59	AVSS	–	Analog GND.
60	CLTV	I	Internal VCO control voltage input for both master PLL of the playback digital PLL and recording EMF PLL-type.
61	PCO	O	Phase comparison output for both master PLL of the playback digital PLL and recording EMF PLL-type.
62	FILI	I	Filter input for both master PLL of the playback digital PLL and recording EMF PLL-type.
63	FILO	O	Filter output for both master PLL of the playback digital PLL and recording EMF PLL-type.
64	PEAK	I	Peak hold signal input of quantity of light. When “L”, SRAM.
65	BOTM	O	Bottom hold signal input of quantity of light.
66	ABCD	I	Quantity of light signal input.
67	FE	I	Focus error signal input.
68	AUXI	I	Auxiliary input 1.
69	VC	I	Mid-point voltage input.
70	ADIO	O	Monitor output of the A/D converter input signal.
71	TEST3	–	Test terminal. Connected to GND.
72	AVDD	–	Analog GND.
73	ADRT	I	Voltage input of A/D converter activation range upper limit.
74	ADRB	I	Voltage input of A/D converter activation range lower limit.
75	AVSS	–	Analog GND.

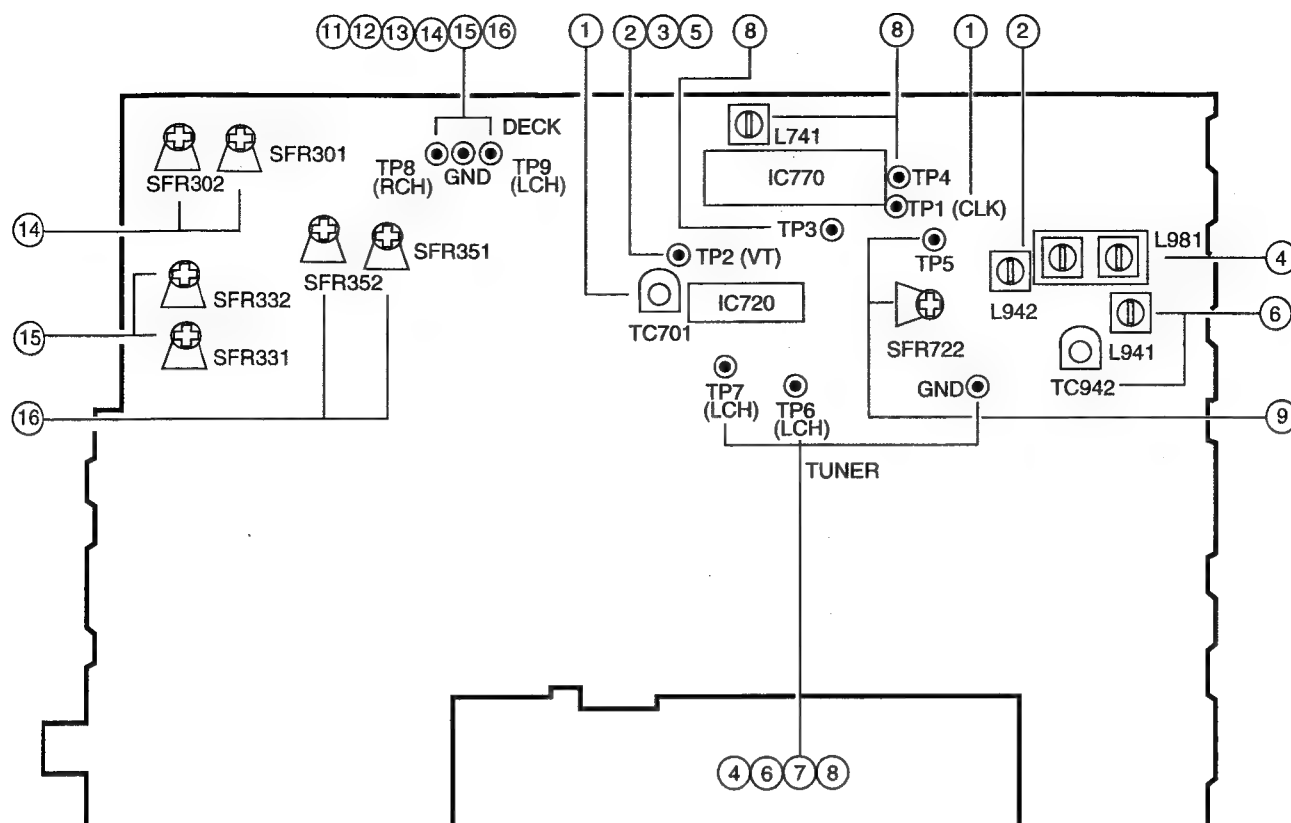
Pin No.	Pin Name	I/O	Description
76	SE	I	Sled error signal input.
77	TE	I	Tracking error signal input.
78	AUX2	I	Auxiliary input 2.
79	DCHG	I	Connected to GND.
80	TEST6	I	Test terminal. Connected to GND.
81	TEST1	I	Test terminal. Connected to GND.
82	ADFG	I	ADIP binary signal (22.05 ± 1 kHz) input.
83	TS25	I	Test terminal. Connected to GND.
84	LDDR	O	Laser drive output.
85	TRDR	O	Tracking servo drive output. (–)
86	TFDR	O	Tracking servo drive output. (+)
87	FFDR	O	Focus servo drive output.(+)
88	DVDD	–	Digital power supply.
89	FRDR	O	Focus servo drive output.(–)
90	FS4	O	4Fs output (176.4 kHz).
91	SRDR	O	Sled servo drive output. (–)
92	SFDR	O	Sled servo drive output. (+)
93	SFRD	O	Spindle servo drive output. (–)
94	SPFD	O	Spindle servo drive output. (+)
95	DCLO	O	Sled servo drive evaluation-type serial data output. (Not used)
96	DCLI	I	Spindle servo evaluation-type serial data input.
97	XDCL	O	Spindle servo evaluation-type serial data load signal input. (Not used)
98	OFTRK	O	Off-track signal output. When “H”, off-track.(Not used)
99	COUT	O	Track jump number count signal output.
100	DVSS	–	Digital GND.

IC, CXD2536CR

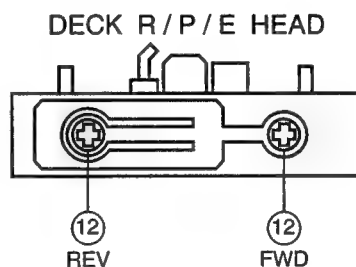
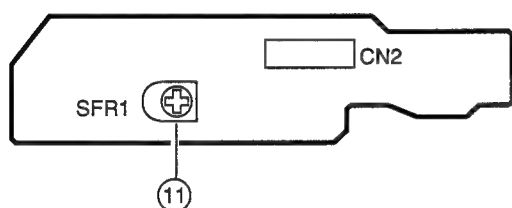
Pin No.	Pin Name	I/O	Description
1	VDD	–	Power supply terminal.
2	SWDT	I	Microprocessor serial interface data input.
3	SCLK	I	Microprocessor serial interface shiftlock input.
4	XLAT	I	Microprocessor serial interface latch input. Latch with start up.
5	SRDT	O	Microprocessor serial interface data output.
6	SENS	O	Terminal that outputs the internal status in response to the address of Microprocessor serial interface.
7 , 8	SMDO , SMDI	I/O	Serial command control mode.
9	XINT	O	Interrupt request output terminal. When an interruption status has occurred, “L”.
10	RCPB	I	“H” is the recording mode/ “L” is the playback mode.
11	WRMN	I	“H” is the write mode/ “L” is the monitor mode.
12	TX	I	Enable signal input terminal of the recording data output. Enable with “H”.
13	VSS	–	Connected to GND.
14 ~ 16	TST0 ~ TST2	I	Test-type terminal. Connected to GND.
17	XRST	I	Input with reset. When “L”, reset.
18 ~ 21	TS0 ~ TS3	I	Test-type terminal. Connected to GND.
22 ~ 24	TST3 ~ TST5	I	Test-type terminal. Connected to GND.
25	VSS	–	Connected to GND.
26	AIR CPB	O	ATrac block recording/playback mode output. When “H”, recording mode. When “L”, playback mode. (Not used)
27 ~ 35	TST6 ~ TST14	O	Test-type terminal. Open. (Not used)
36 , 37	OSCO , OSCI	I/O	Crystal oscillating circuit output terminal (1024Fs).
38	VSS	–	Connected to GND.
39 , 40	TST15 ~ TST16	O	Test-type terminal. Open. (Not used)
41	DOUT	O	REC monitor output/Decode audio data output.
42	ADIN	I	Analog recording input terminal (Connected external A/D converter output).
43	ABCK	O	XBCK(64Fs) output terminal to the external audio block.
44	ALRCK	O	LRCK(Fs) output terminal to the external audio block.
45 ~ 47	SA2 ~ SA0	O	SRAM address bus. (Not used)
48 , 49	A11 ~ A10	O	SRAM address bus. (Not used)
50	VSS	–	Connected to GND.
51	VDD	O	Power supply terminal.
52 ~ 55	A03 ~ A00	O	RAM address bus.
56 ~ 60	A04 ~ A08	O	RAM address bus.
61	XOE	O	RAM output enable.
62	XCAS	O	DRAM CAS output.
63	VSS	–	Connected to GND.
64	XCS	O	RAM chip select. When “H”, DRAM. When “L”, SRAM.
65	A09	O	RAM’s address bus.
66	XRAS	O	DRAM RAS output.
67	XWE	O	RAM address bus.

ADJUSTMENT-1 <TUNER / DECK>

A MAIN C.B



G DECK C.B



< TUNER SECTION >

1. Clock Frequency Adjustment
 Settings : • Test point : TP1
 • Adjustment location : TC701
 Method : Set to AM 1602kHz<EZ>, AM 1710kHz<U> and adjust TC701 so that the test point becomes 2052kHz ± 0.01 kHz<EZ>, 2160kHz ± 0.01 kHz<U>.
2. LW VT Adjustment <EZ>
 Settings : • Test point : TP2 (VT)
 • Adjustment location : L942
 Method : Set to LW 144kHz and adjust L942 so that the test point becomes 1.3 ± 0.05 V.
3. AM (MW) VT Check
 Settings : • Test point : TP2 (VT)
 Method : Set to AM 1602kHz<EZ>, AM 1710kHz<U> and check that the test point is less than 7.5V<EZ>, less than 8.0V<U>.
4. AM (MW) Tracking Adjustment
 Settings : • Test point : TP6, TP7
 • Adjustment location : L981.....999kHz
 Method : Set to MW 999kHz<EZ>, MW 1000kHz<U> and adjust L981 so that the test point becomes maximum.
5. FM VT Check
 Settings : • Test point : TP2 (VT)
 Method : Set to FM 87.5MHz and check that the test point is more than 1.5V<EZ>, more than 1.0V<U>, then set to FM 108.0MHz and check that test point is less than 8.2V<EZ>, less than 8.0V<U>.

Settings : • Test point : TP6, TP7
• Adjustment location :
L941 144kHz
TC942 290kHz

Method : Set up TC942 to center before adjustment. The level at 144kHz is adjust to maximum by L941. Then the level at 290kHz is adjust to maximum by TC942.

Settings : • Test point : TP6, TP7
Method : Set to FM 98.0MHz and check that the test point is
6dB ± 6dB<EZ>, 2dB ± 6dB<U>.

Settings :

- Test point : TP3, TP4 (DC balance)
TP6, TP7 (Distortion)
- Adjustment location : L741
- Input level : 54dB

Method : Set to FM 98.0MHz and adjust L741 so that the voltage between TP3 and TP4 becomes $0V \pm 0.04V$.
Next, check that the distortion is less than 1.8%.

Settings :

- Test point : TP5
- Adjustment location : SFR722
- Input level : 20dB

Method : Set to FM 98.0 MHz and adjust voltage low (about 0.01V) by SFR722. After that voltage high (about 7.0V) by 2dB down.

MW
Settings : • Input level : Variable
Method : Check auto stop at MW 999 kHz<EZ>, MW
1000kHz<U> the level is 55dB +10/-15 dB.

Settings • Input level : Variable
Method : Check auto stop at FM 98.0 MHz and the level is 20dB \pm 5dB.

< DECK SECTION >

Settings : • Test tape : TTA-100
• Test point : TP8, TP9
• Adjustment location : SFR1

Method : Play back the test tape and adjust SFR1 so that the frequency counter reads 3000Hz \pm 30Hz at FWD play and 3000Hz \pm 45Hz at REV play.

Settings :

- Test tape : TTA-300
- Test point : TP8, TP9
- Adjustment location : Head azimuth adjustment screw

Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum.
Next, perform on REV PLAY mode.

Settings :

- Test tape : TTA-300
- Test point : TP8, TP9

Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is $\pm 2\text{dB}$.

Settings :

- Test tape : TTA-200
- Test point : TP8, TP9
- Adjustment location : SFR301 (Lch)
SFR302 (Rch)

Method : Play back the test tape and adjust SFRs so that the output level of the test point become $300\text{mV} \pm 10\text{mV}$.

Settings :

- Test tape : TTA-602
- Test point : TP8, TP9
- Input signal : 1kHz / 10kHz (LINE IN)
- Adjustment location : SFR331 (Lch)
SFR332 (Rch)

Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 21mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output of the 10kHz signals becomes 0dB \pm 0.5dB with respect to that of the 1kHz signal.

Settings :

- Test tape : TTA-602
- Test point : TP8, TP9
- Input signal : 1kHz (LINE IN)
- Adjustment location : SFR351 (Lch)
SFR352 (Rch)

Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 21mV. Record and play back the 1kHz and adjust SFRs so that the output is 21mV \pm 0.5dB.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity :	3dB ± 6dB [at 87.5 / 98.0MHz (U)] 6dB ± 6dB [at 108.0MHz (U)] 8dB +6/-10dB [at 87.5 / 98.0MHz (EZ)] 10 +6/-10dB [at 108.0MHz (EZ)]
Signal to noise ratio :	(MONO) More than 65dB [at 98.0MHz (U)] (STEREO) More than 64dB [at 98.0MHz (U)] (MONO) More than 60dB [at 98.0MHz (EZ)] (STEREO) More than 57dB [at 98.0MHz (EZ)]
Distortion :	(MONO) Less than 2.0% [at 98.0MHz] (STEREO) Less than 2.0% [at 98.0MHz]
Auto stop level :	20dB ± 10dB [at 98.0MHz (U)] 30dB ± 8dB [at 98.0MHz (EZ)]
Stereo separation :	More than 25dB [at 98.0MHz (U)] More than 20dB [at 98.0MHz (EZ)]
Intermediate frequency :	10.7MHz

<AM(MW) SECTION>

Sensitivity :	52 ~ 62dB
(S/N 20dB)	[at 600kHz(U)]
	[at 603kHz(EZ)]
	48 ~ 58dB
	[at 1000 / 1400kHz(U)]
	[at 999 / 1395kHz(EZ)]
Signal to noise ratio :	More than 36dB
	[at 1000kHz(U)]
	[at 999kHz(EZ)]
Distortion :	Less than 1.5%
	[at 1000kHz(U)]
	[at 999kHz(EZ)]
Auto stop level :	55dB +10/-15dB
	[at 1000kHz(U)]
	[at 999kHz(EZ)]
Intermediate frequency :	450kHz

<LW SECTION (EZ)>

Sensitivity : (S/N 20dB)	64dB \pm 5dB [at 144kHz] 62dB \pm 5dB [at 198kHz] 60dB \pm 5dB [at 290kHz]
Signal to noise ratio :	More than 36dB [at 198kHz]
Distortion :	Less than 1.4% [at 198kHz]
Auto stop level :	61dB \pm 10/-15dB [at 198kHz]
Intermediate frequency :	450kHz

<DECK SECTION>

Tape speed :	3000Hz \pm 45Hz
Wow & flutter :	Less than 0.15% (after 15 mins PLAY) (WRMS)
Take-up torque :	30 ~ 55g-cm (FWD, REV)
F.F & REW torque :	75 ~ 160g-cm
Back tension :	-1 ~ 7g-cm (FWD, REV)
PB output level :	1.5V \pm 2dB (SP OUT 2V)
REC/PB output level :	2.0V \pm 2dB (SP OUT 2V)
Distortion (REC/PB) :	Less than 2.0% (NORM,CrO ₂)
Noise level (PB) :	Less than 60/50 mV (NORM,CrO ₂ ,DOLBY OFF/B-ON)
Noise level (REC/PB) :	Less than 60/50 mV (NORM,CrO ₂ ,DOLBY OFF/B-ON)
Erasing ratio :	More than 60 dB (at 125Hz, 10VU, CrO ₂)
Test tape :	TTA-602 (NORMAL) TTA-615 (CrO ₂)



- ① In the ALL SV OFF mode, press the PAUSE key and change to SELECT PIT.
- ② Move the pick-up to the innermost periphery.
- ③ Press the buttons in the order of [PLAY] → [ENTER] and change to ALL SV ON.
- ④ Rotate JOG, display the error rate and check that the error is the same as the numerical values that appear below.

Cl : At or below 0060
Err : 0000 (zero)

Pin No.	Pin Name	I/O	Description
68, 69, 70, 71	D1, D0, D2, D3	I/O	RAM data bus.
72 ~ 74	D4 ~ D6	I/O	RAM data bus. (Not used)
75	VSS	–	Connected to GND.
76	D7	I/O	RAM data bus. (Not used)
77	ERR	I/O	Data input terminal to the C2PO exclusive use RAM. (Not used)
78	EXTC2R	I	Selection of C2PO exclusive use RAM. When using, “H”. When not in use, “L”.
79	BUSY	O	Busy output of RAM access. When “H”, RAM access. (Not used)
80	EMP	O	Output of signal indicating ATRAC data state just prior to empty or full. (Not used)
81	FUL	O	Output of signal indicating ATRAC data state just prior to empty or full. (Not used)
82	EQL	O	ATRAC data empty (when ASC-DSC, “H”). (Not used)
83	MDLK	O	Indicates Recording/Playback data Main/Sub. When “H”, sub or linking. When “L”, main. (Not used)
84	CPSY	O	Internal sync output. (Not used)
85 , 86	CTMD1 , CTMD0	O	Internal counter mode output. (Not used)
87	SPO	O	512 Fs output.
88	VSS	–	Connected to GND.
89	MDSY	O	Main data sync detection output. (Not used)
90	LRCK	I	LRCK (Fs) from the EFM encoder/decoder input terminal.
91	BCK	I	BCK (64Fs) from the EFM encoder/decoder input terminal.
92	C2PO	I	C2PO from the EFM encoder/decoder input terminal.
93	DATA	I/O	Data from the EFM encoder/decoder input/output terminal.
94	DIDT	I	Digital recording input terminal.
95	DODT	O	REC monitor output/Decode audio data output.
96	DIRCPB	O	Recording to the EMF encoder/Playback mode output. When “H”, recording mode. When “L”, playback mode.
97	MIN	I	External monitor signal input terminal. Input desired monitor signal.
98	TST17	I	Test-type terminal. Connected to VDD.
99	TST18	O	Test-type terminal. Open. (Not used)
100	VSS	–	Connected to GND.

(3) Recording area of the MO disk

- * It is possible to check the error rate of a Recording/Playback disk that has previously been recorded. With this, it is possible to create a standard for judging the quality of a disk in the recording mode.

Test disk : Recording-completed MO disk

- ① In the ALL SV OFF mode, press the PAUSE key and change to SELECT GRV.
- ② Slightly move the pick-up from the innermost periphery toward the outer periphery.
- ③ Press the buttons in the order of [PLAY] → [ENTER] and change to ALL SV ON.
- ④ Rotate JOG, display the error rate and check that the error is the same as the numerical values that appear below.

CI : At or below 0060 (standard value)

Err : No need to check

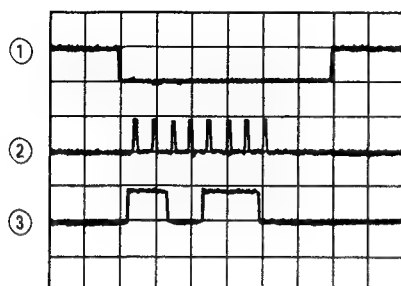
Note : ① The recording start area of the MO disk is the address of 32nd cluster or later. Correct numerical values will not be displayed for the error rates of address displays previous to 32 clusters.

- ② When performing measurements on a Pre-recorded disk in the test mode, due to reasons related to data-processing the numerical values in the error display will, without fail, go up. This is not abnormal. In this mode is only checking of the CI point error rate.

WAVEFORM

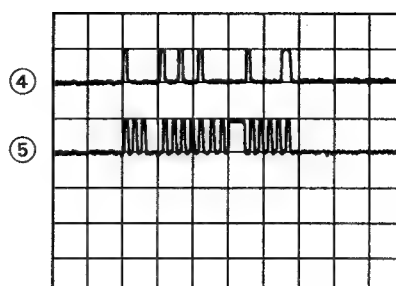
[LED Display]

- ① IC901 Pin ⑪ (LLATCH) VOLT/DIV : 5 V
- ② IC901 Pin ⑬ (LCLK) TIME/DIV : 20 μ S
- ③ IC901 Pin ⑫ (LDATA)



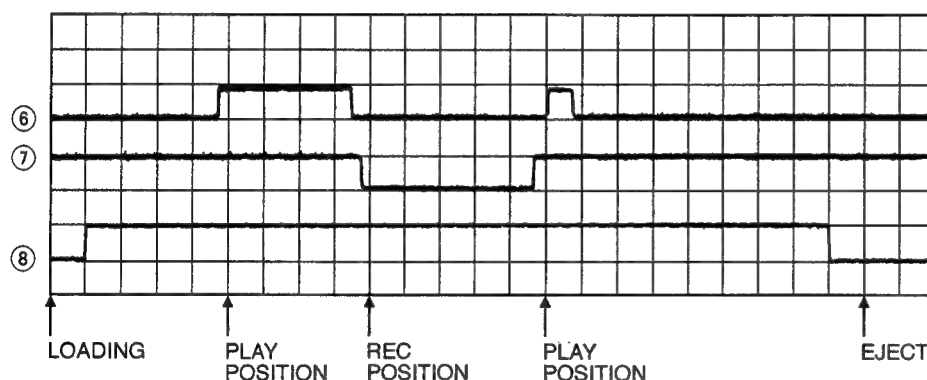
[REC VR Data transfer]

- ④ IC901 Pin ⑰ (RDT) VOLT/DIV : 5V
- ⑤ IC901 Pin ⑱ (RCLK) TIME/DIV : 100 μ s



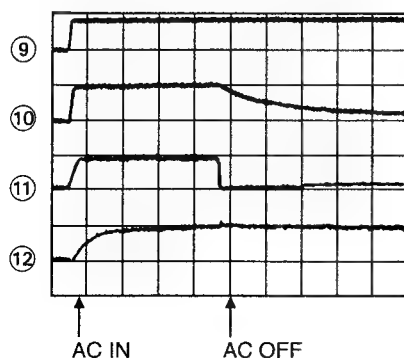
[Loading SW]

- ⑥ IC901 Pin ④ (PB SW) VOLT/DIV : 5V
- ⑦ IC901 Pin ⑤ (REC SW) TIME/DIV : 200 mS
- ⑧ IC901 Pin ③ (LD SW)



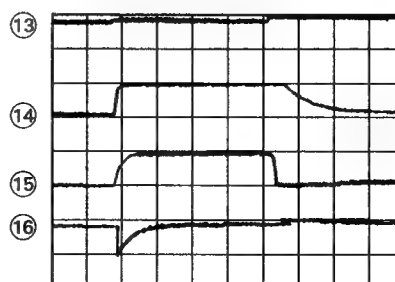
[Put AC from ZERO CHARGE]

- ⑨ IC901 Pin ⑨① (VCC) VOLT/DIV : 5V
- ⑩ IC901 Pin ⑩② (AVREF) TIME/DIV : 500mS
- ⑪ IC901 Pin ③④ (AC OFF)
- ⑫ IC901 Pin ③⑤ (RESET)



[Put AC at BACK UP Timer]

- ⑬ IC901 Pin ⑨① (VCC) VOLT/DIV : 5V
- ⑭ IC901 Pin ⑩② (AVREF) TIME/DIV : 500mS
- ⑮ IC901 Pin ③④ (AC OFF)
- ⑯ IC901 Pin ③⑤ (RESET)



TEST MODE – 1 <MD>

1. How to Activate/Cancel the Test Mode and notices when testing.

(1) How to Activate Test Mode

With the MD section, there are two methods possible for start up in the test mode.

Method 1 : Short the Test Land by soldering. (refer to Fig. 2)

Method 2 : Perform the operations as follows;

- 1) Change the set to the Power off (STANDBY) mode. Make sure that the loading mechanism is in the EJECT mode at this time. (Do not activate the test mode with the disk inserted, because the mechanism will change to the EJECT procedure and impossible to start up the test mode.
- 2) While pressing the Power button, press the STOP button. (press both buttons simultaneously)

After that, press the following buttons in the order of (Display → EJECT → Display → EJECT). When the test mode has been started up, the display (FL) will be fully illuminated. After this occurs, [Welcome to Minidisc TEST MODE] will be displayed.

(2) How to cancel Test Mode

- 1) Situation when Test Land has been shorted: Disconnect the AC plug and remove solder from the Test Land.
- 2) Situation when activate has been performed with buttons : Press the Power SW button and turn off the power. Or, disconnect the AC plug.

The test mode can also be canceled by pressing the EJECT button, when performing a reliability test on the TEST MODE communication mode.

(3) Notices when testing

- 1) Mechanical abnormalities are disregarded within the TEST MODE. For this reason, when an abnormality in action appears to occur, immediately disconnect the AC plug.
- 2) Playback and record are not possible within the TEST MODE.

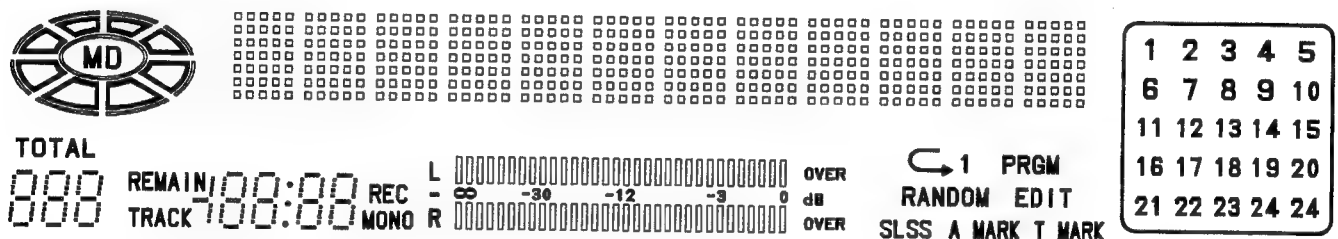


Fig. 1. FL fully illuminated

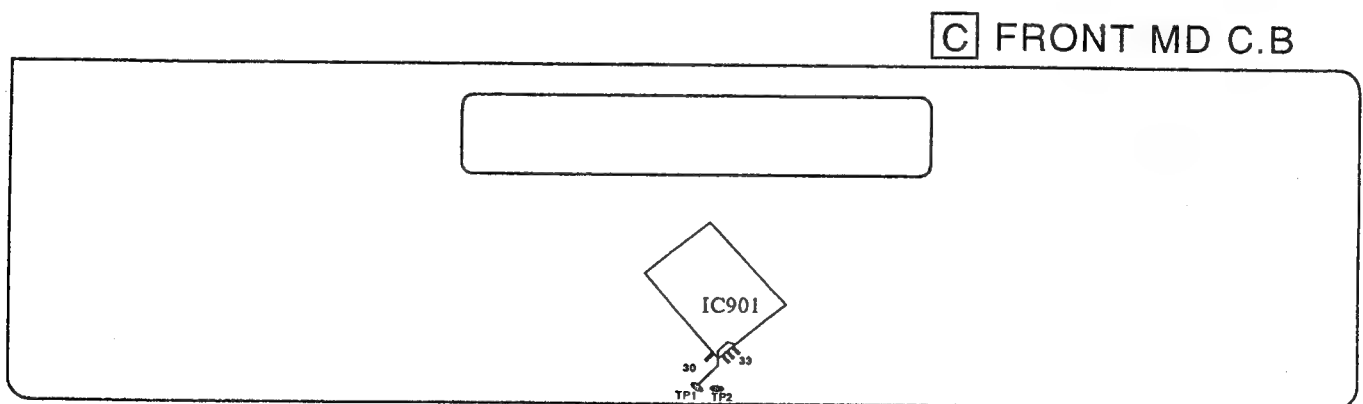


Fig. 2. Position of Test Land

2. Verification during activate of TEST MODE

(1) Display

The FL display is fully illuminated.

(2) Verification of playback related audio circuits is possible.

- Verifiable circuits DAC, LINE AMP, HP AMP, DIGITAL OUTPUT, LINE OUTPUT, HP OUTPUT
- Output Level 1kHz, -12dB (LINE OUTPUT)

3. Changeover to SERVO standby mode

In order to activate each servo test mode, press the EJECT button and changing to the SERVO standby mode (ALL SV OFF) after starting up the test mode (full-illumination). Note : It is not possible to directly activate the SERVO from the full-illumination mode.

4. Checking of each switch status



Checking of set or mechanism switch status, ON/OFF (switch contact) is possible with the FL display. FL indicate the status of switch ON/OFF by lighting on or off each display frame. (Only frames are lit on or off. Words are lit all the time).

SW NAME	SW CONDITIONS	FL DISPLAY		DISK
		SW ON	SW OFF	
REC PROTECT	The accidental-erasure prevention hole is closed (REC possible)	EDIT	————	Recording-type disk
REFLECT	The high reflection DISK (CD), ON	RANDOM	————	Playback-type disk
INNER	The pick up is in the innermost periphery (LIMIT SW is ON)	PRGM	————	————

* It is possible to indicate LOADING, UNLOADING and OWH's UP, DOWN status with the three display SLSS, AUTOMARK and TIMEMARK.

	MECHANISM CONDITIONS	FL DISPLAY		
1)	In the LOADING status (OWH UP mode) The three SLSS, AUTOMARK, AND TIMEMARK are illuminated.	SLSS	AUTOMARK	TIMEMARK
2)	In the UNLOADING status Only TIMEMARK are illuminated.	TIMEMARK		
3)	In the OWH DOWN status Only the SLSS are illuminated.	SLSS		

5. Checking SLED Operation

It is possible to check the transfer operations of the SLED MOTOR and the Pick up with the  (toward the outer periphery) and  (toward the inner periphery) keys. "T.SLED FWD" will be displayed on the FL display when during transfer to the outer periphery, and "T.SLED RVS" when during transfer to the inner periphery.

6. Checking Laser output

It is possible to change the output of Laser Power with every pressing of the EDIT key in the STOP mode. It is possible to perform repeated operations for laser output through the sequence of CD-R → MO-R → 1/2 LASER → MO-W → OFF and also possible to perform mode check with the FL display and the Lch side level meters.

MODE	DISPLAY
CD-R	LASER CD
MO-R	LASER MO
1/2 LASER	LASER 1/2
MO-W	LASER WR
OFF	LASER OFF

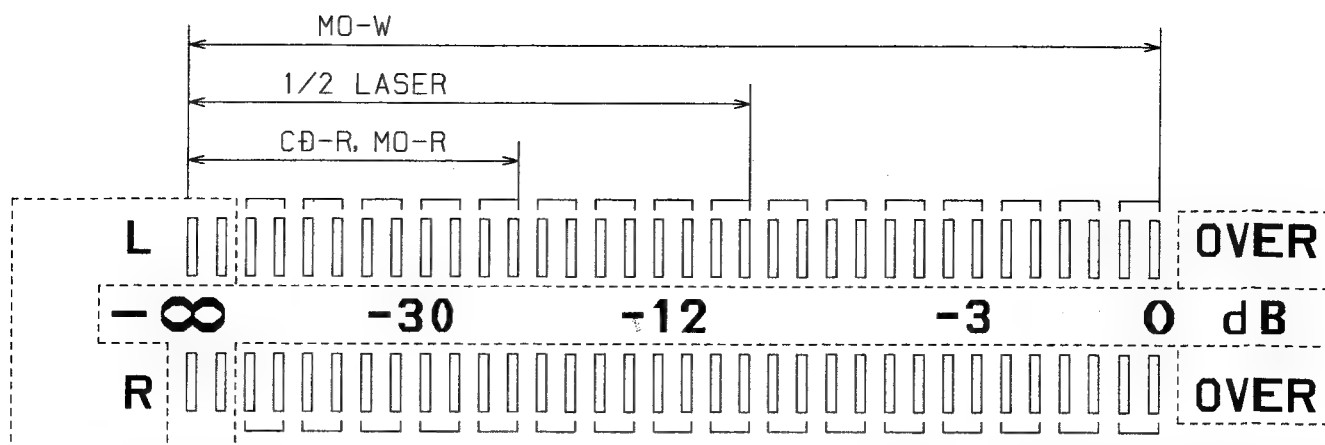


Fig. 3. FL level meter (The level meter display shows modes, it does not display the quantity of light generated.)

7. Checking of the activation of the Loading mechanism

It is possible to check the activation of the Loading mechanism with the DISPLAY or FUNCTION keys.

- * DISPLAY DEY LOADING
- * FUNCTION KEY UNLOADING (EJECT)

For this mode, limited to the time when performing UNLOADING, it is possible to stop the mechanism in the optional position. (When in LOADING, if the DISPLAY key is held down, the mechanism will automatically be moved to the LOADING-completed position.)

8. OWH (OVERWRITE HEAD)

Checking of the activation of the OWH is possible by pressing the DISPLAY, FUNCTION keys with the LOADING MECHANISM in the LOADING MODE.

- * DISPLAY DEY OWH is DOWN
- * FUNCTION KEY OWH is UP

9. Checking SERVO activation

(1) FOCUS SEARCH and SPINDLE KICK

With no disk inserted and by pressing the PLAY key, it is possible to check the activation of the FOCUS SEARCH and the SPINDLE KICK. This mode with repeat until the STOP key is pressed. (When the LOADING MECHANISM is changed to the LOADING mode, activation can be checked by direct observation.)

(2) FOCUS SERVO

- 1) Insert the disk.
- 2) Press the PAUSE key and make selections adjusted to the disk inserted with the SERVO mode.
 - * Magneto-optical disk (MO disk) SELECT GRV
 - * Aluminum disk (CD software) SELECT PIT
- 3) Press the PLAY key and turn on Focus.

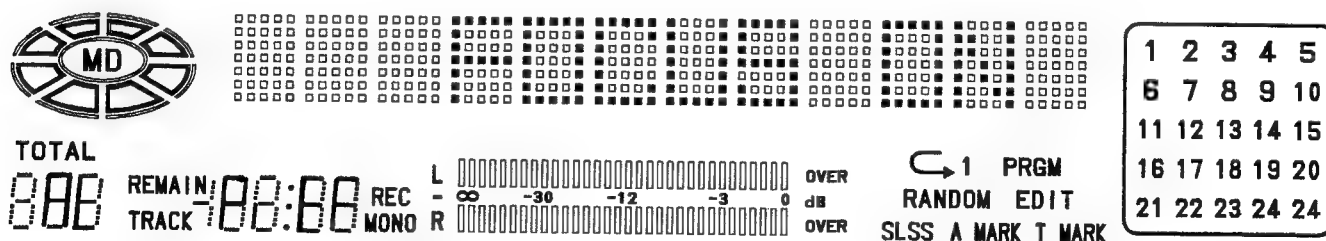


Fig. 4. AL (Aluminum (CD) disk)

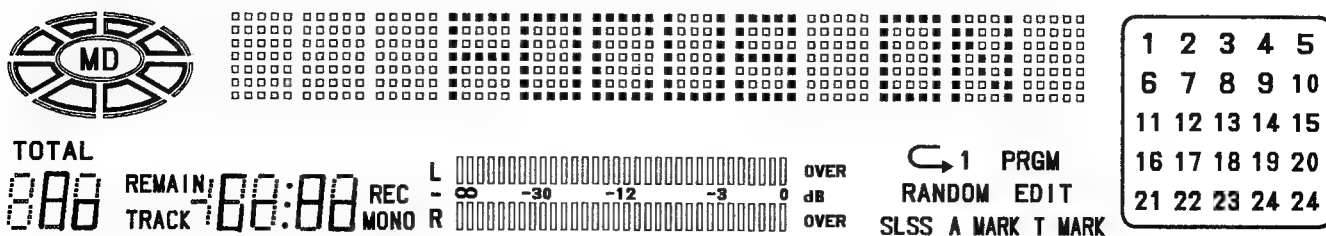


Fig. 5. MO (Recording/Playback disk)

(3) ALL SERVO ON

When the ENTER key is pressed after turning on the FOCUS SERVO, the TRACKING and SLED SERVO turn on and all SERVOS are activated. At this time, on the FL "ALL SV ON" will be displayed in the lower left disk address.

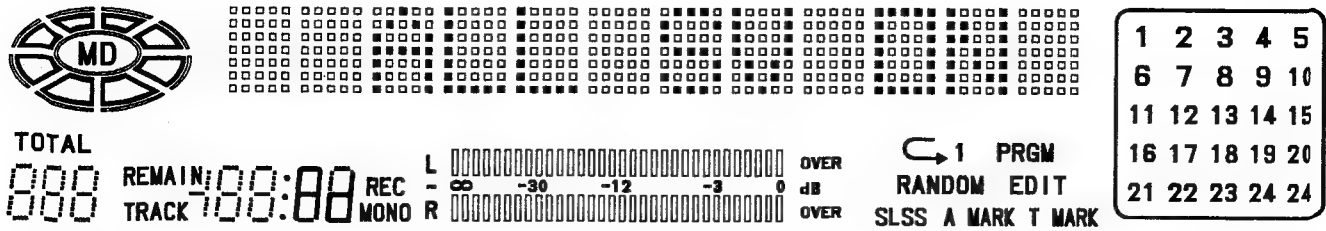


Fig. 6. MO (Recording/Playback disk)

10. Communications reliability test

The communications reliability test mode is activated by pressing the EJECT button from the SERVO MODE. In this mode, the communications test is performed the front board's CPU and the MD board's CPU, and checking of the data bus line between the CPUs is performed. In the center of the FL, the number of communications test are displayed (displayed with TIMES), and the number of Errors is displayed in the lower left (Err ○○). If up until 1000 TIMES, Error count is zero, or E3, E4 do not appear, it can be determined that communication between the CPUs is operating normally.

Test mode will be canceled when the EJECT button is pressed after running the communications reliability test.

TEST MODE - 2 <CD>

1. How to Activate CD Test Mode

1) Insert the AC plug while pressing the function CD button.

2) All FL display tubes will light up, and initialization will be started. (Initialize time: approx. 80 seconds)
2. How to cancel CD Test Mode

Either one of the following operations will cancel the CD test mode.

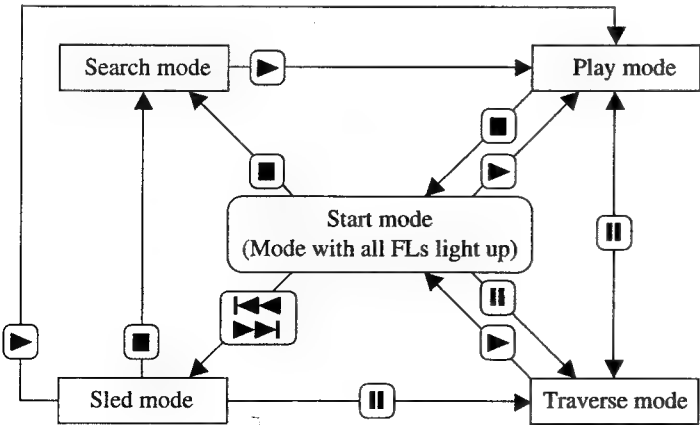
 - Press the function button.
 - Press the power switch button.
 - Disconnect the AC plug.

3. CD Test Mode Functions
- When test mode is activated, the following mode functions from No. 1 to No. 5 can be used by pressing the operation keys.

Mode / No.	Operation	FL display	Operation	Contents
Start mode No.1	Test mode activation	All FL light up	(CD block power supply ON)	Displays the machine mode that it is a test mode. All FL displays light up
Search mode No. 2	■ key		<ul style="list-style-type: none">• Laser diode illuminated under normal circumstances• Continual focus search * NOTE 1 (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes.	<ul style="list-style-type: none">• Laser current measurement (Across R4 82ohms resistor)FOCUS SERVO• Check focus search waveform (FSC terminal)• Check focus error waveform (FE terminal)
Play mode No. 3	▶ key		<ul style="list-style-type: none">• Normal playback• Focus search is continued if TOC cannot be read * NOTE 1	FOCUS SERVO / TRACKING SERVO CLV SERVO / SLED SERVO (DEF terminal)
Traverse mode No. 4	key		<ul style="list-style-type: none">• During normal disc playback Press once; tracking servo OFF Press twice; tracking servo ON * NOTE 2	TRACKING SERVO ON / OFF Tracking balance (traverse) check check Tracking error waveform (TES1 terminal)
Sled mode No. 5	◀◀ key ▶▶ key	All FL light up	<ul style="list-style-type: none">• Pickup moves to the outermost track• Pickup moves to the innermost track * NOTE 3 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

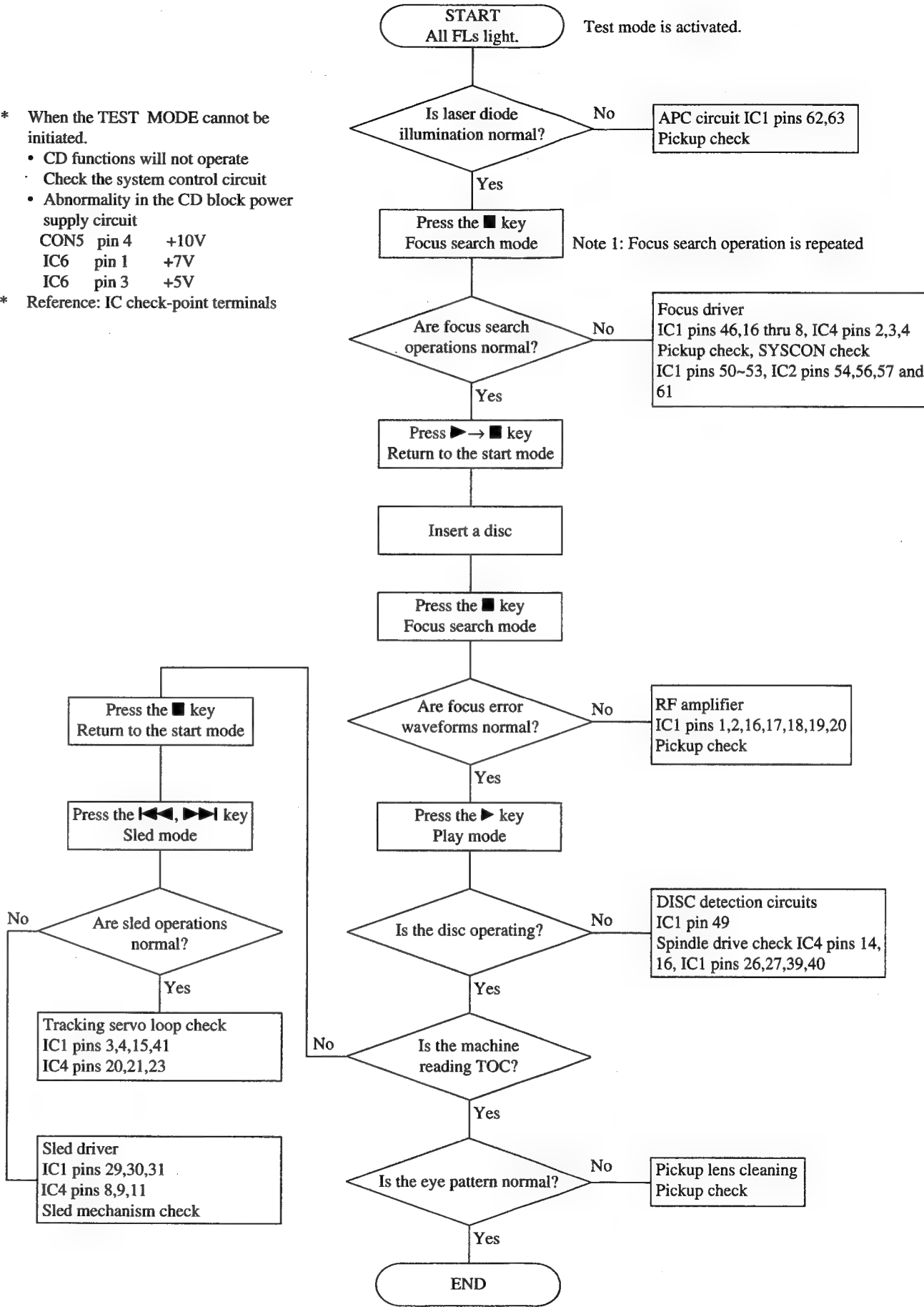
- * NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases, the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.
- * NOTE 2: Do not press the ◀◀ or ▶▶ keys when the machine is in the || status is active. If they are pressed, playback will not be possible after the || status has been canceled. If the ◀◀ or ▶▶ keys are pressed in the || status, press the ■ key and return to start mode (No. 1).
- * NOTE 3: When pressing the ◀◀ or ▶▶ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ◀◀ or ▶▶ keys are pressed, even when the pick-up is at the outermost or innermost track.
- * NOTE 4: Press the eject key if the CD changer mechanism is jammed while initializing.

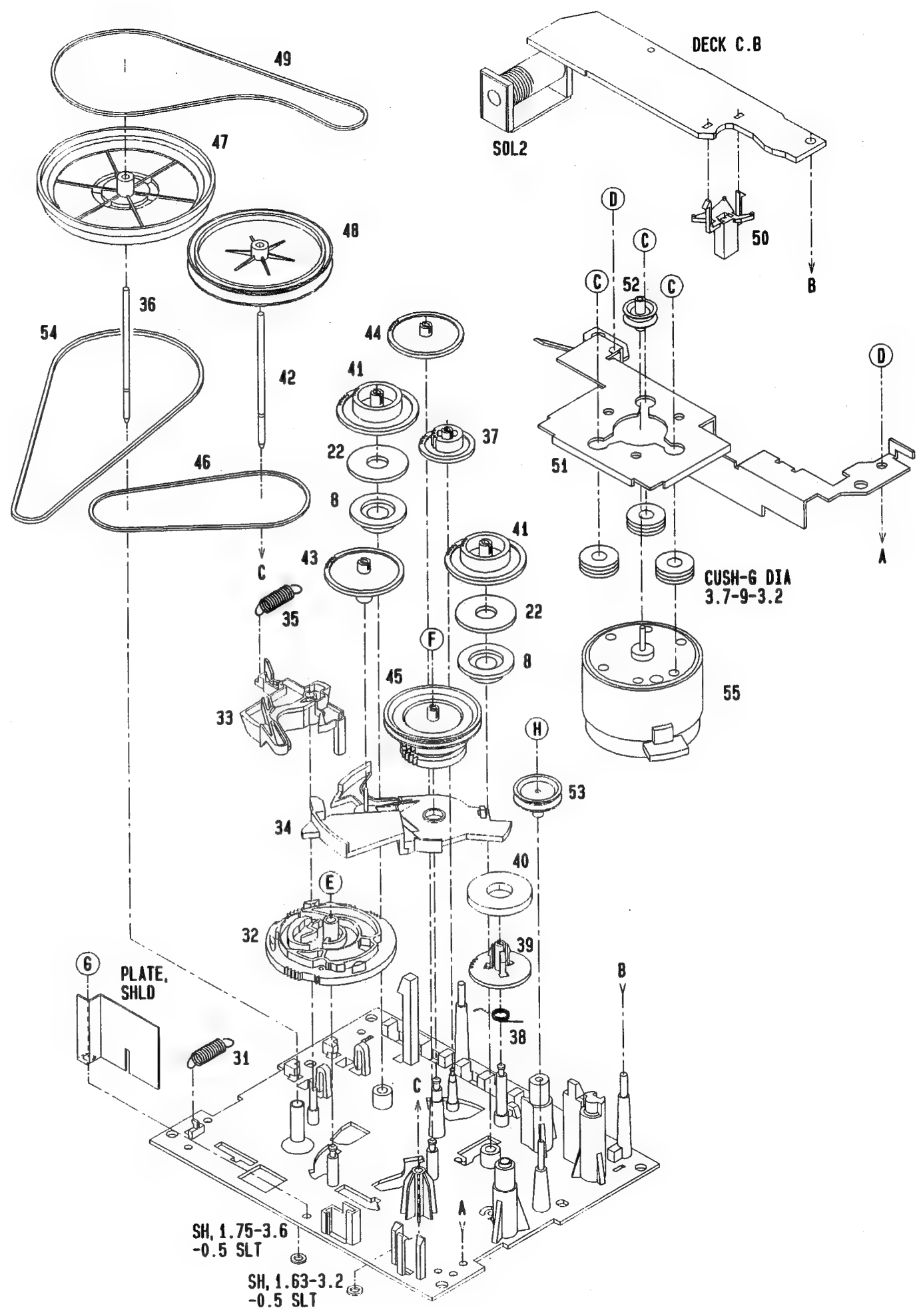
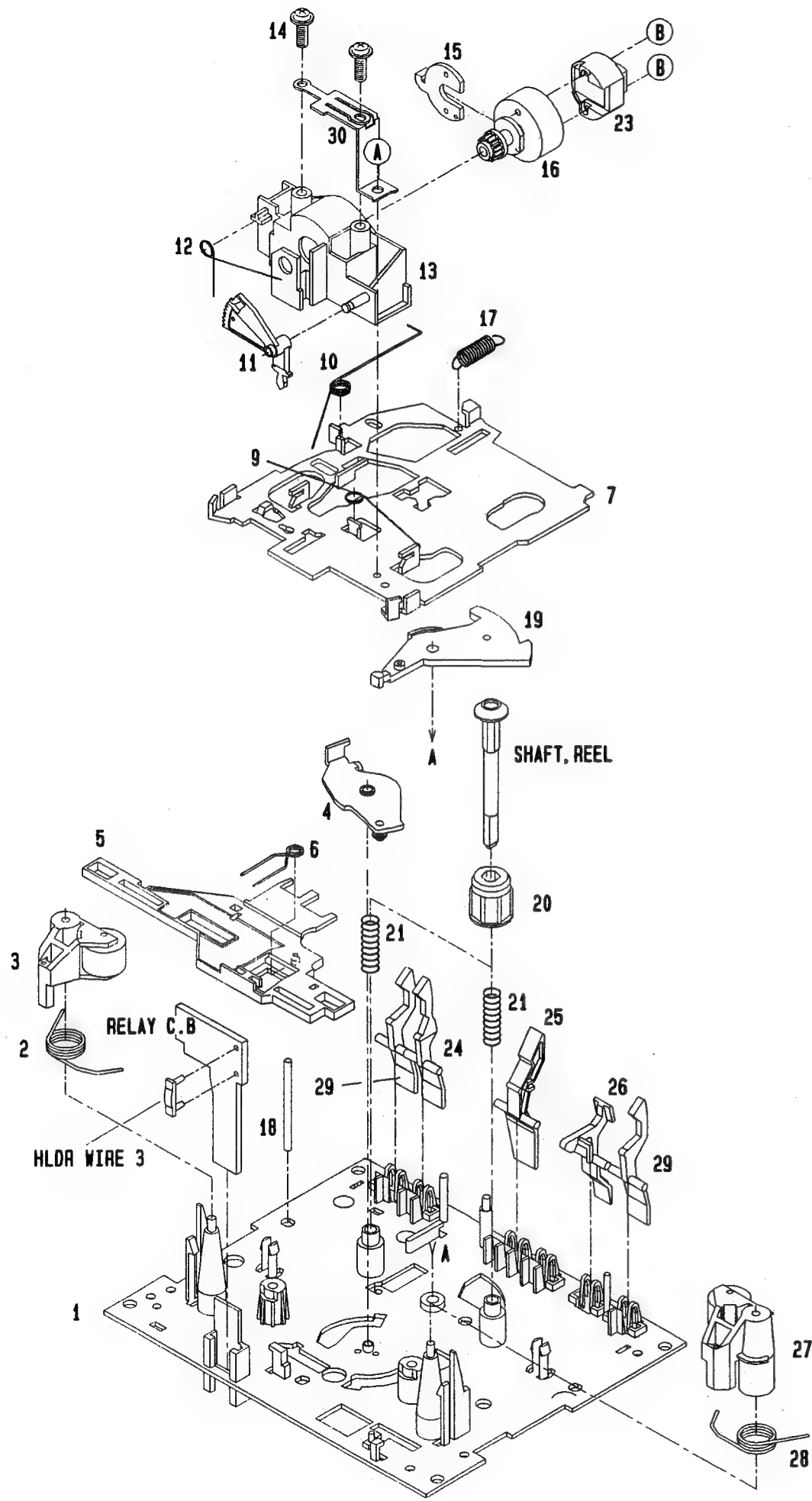
4. Operation Outline
- The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.

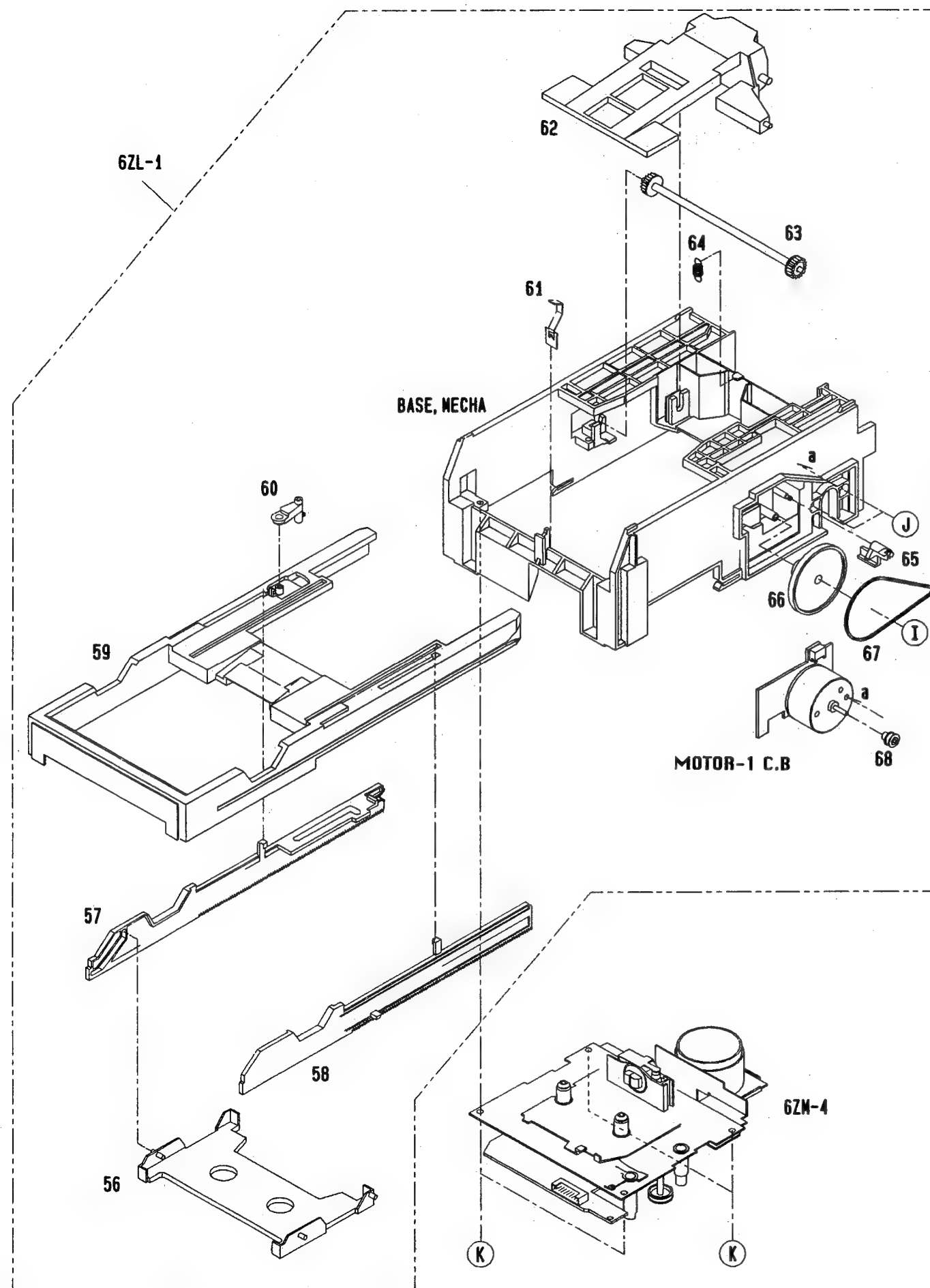


CD TROUBLE-SHOOTING
Flow Chart

- * When the TEST MODE cannot be initiated.
- CD functions will not operate
 - Check the system control circuit
 - Abnormality in the CD block power supply circuit
- CON5 pin 4 +10V
IC6 pin 1 +7V
IC6 pin 3 +5V
- * Reference: IC check-point terminals





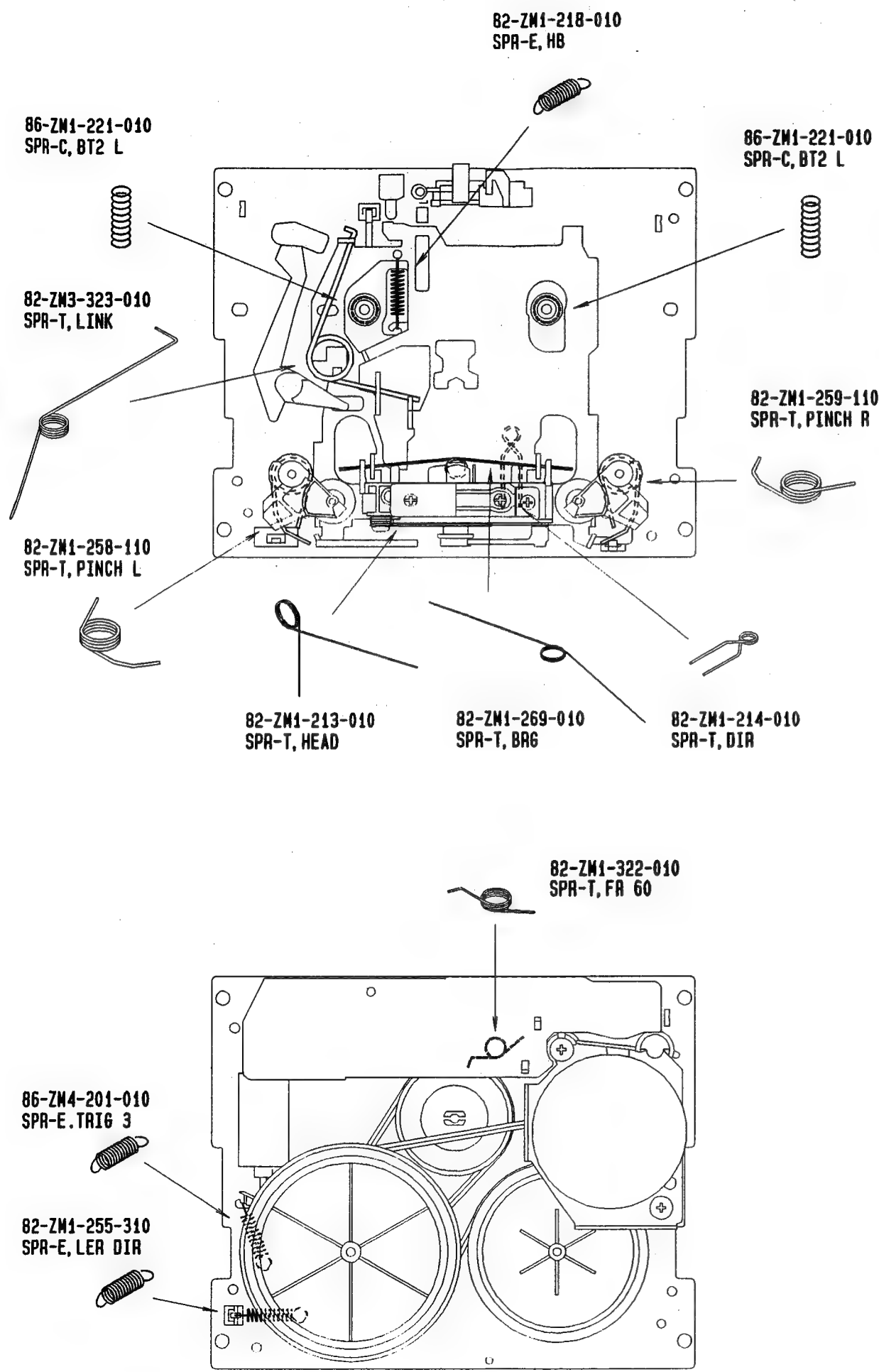


TAPE MECHANISM PARTS LIST 1/1

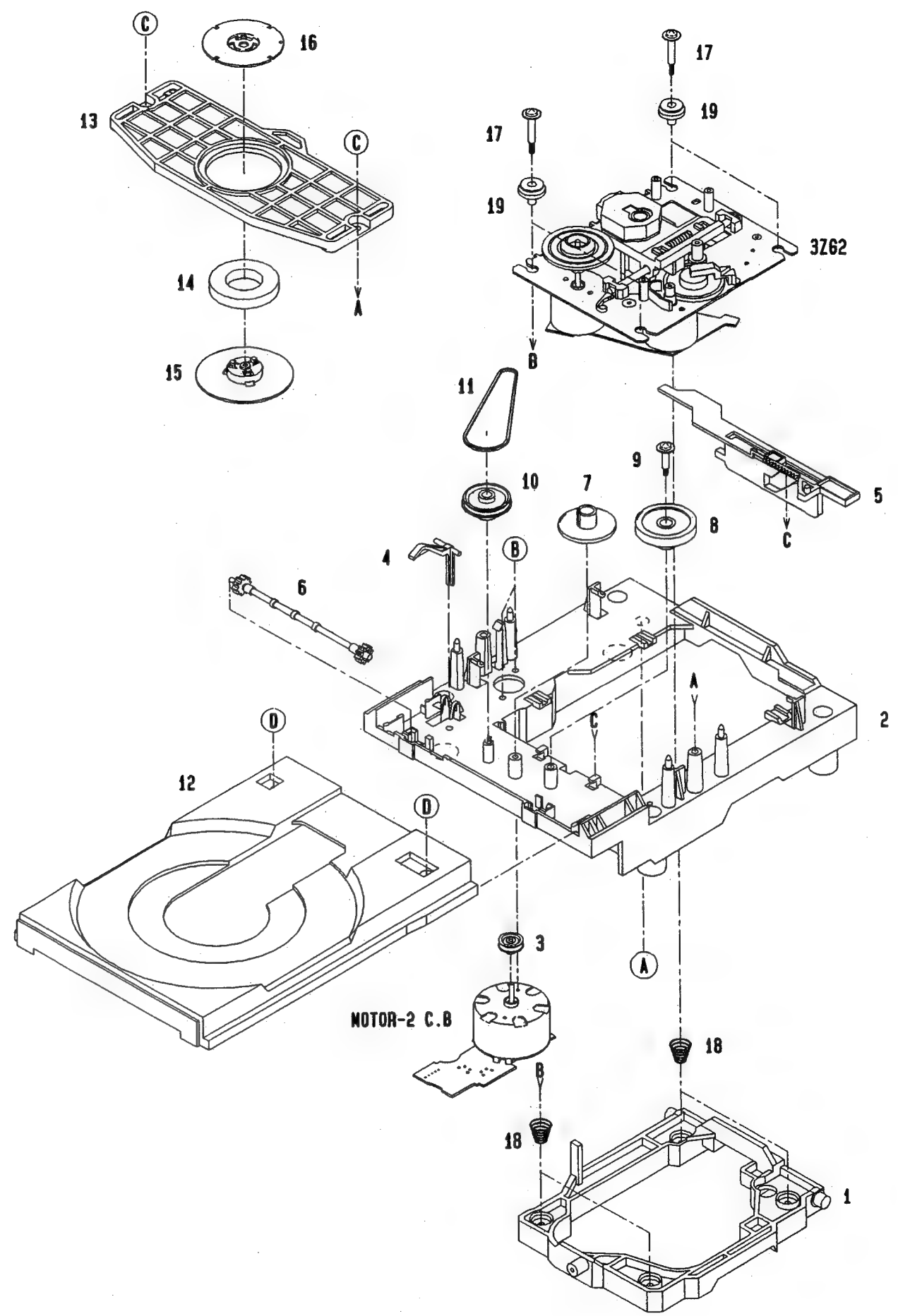
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZM1-218-010		CHAS ASSY, R	41	82-ZM1-216-310		GEAR, REEL
2	82-ZM1-258-110		SPR-T, PINCH L	42	82-ZM1-236-010		CAPSTAN, 2-41.5
3	86-ZM4-202-019		LVR ASSY, PINCH L3	43	82-ZM1-225-210		GEAR, FR
4	82-ZM1-333-010		PLATE, LINK2	44	82-ZM1-226-010		GEAR, REW
5	82-ZM1-266-110		LVR, DIR	45	82-ZM3-333-210		SLIP DISK ASSY 2
6	82-ZM1-214-010		SPR-T, DIR	46	82-ZM1-338-110		BELT, FR 4
7	82-ZM1-206-910		CHAS, HEAD	47	86-ZM1-216-210		FLY-WHL, R L
8	86-ZM1-219-010		CLR, REEL SLIP	48	82-ZM3-330-010		FLY-WHL, L2 W
9	82-ZM1-269-210		SPR-T, BRG	49	86-ZM1-206-010		BELT, MAIN L
10	82-ZM3-323-010		SPR-T, LINK 3	50	82-ZM1-245-210		HLDR, IC
11	82-ZM1-210-110		GEAR, H T	51	86-ZM1-215-010		HLDR, MOT L
12	82-ZM1-213-010		SPR-T, HEAD	52	82-ZM1-247-210		PULLEY, MOTOR
13	82-ZM1-207-710		GUIDE, TAPE	53	82-ZM3-335-010		PULLEY, COUPLER M3
14	82-ZM1-283-310		S-SCREW, AZIMUTH	54	86-ZM1-217-010		BELT, MOT
15	82-ZM1-314-110		PLATE, HEAD	55	87-A90-343-010		MOT, SHU2R 70
16	82-ZM1-208-310		HLDR, HEAD	56	86-ZL1-203-010		TRAY, CAS
17	82-ZM1-218-010		SPR-E, HB	57	86-ZL1-204-010		LEVER, SLIDE L
18	82-ZM3-327-010		SHAFT, COUPLER N2	58	86-ZL1-205-010		LEVER, SLIDE R
19	82-ZM1-222-210		LVR, PLAY	59	86-ZL1-202-010		FRAME, CAS
20	86-ZM1-203-010		CAP, REEL	60	86-ZL1-209-010		LEVER, LOCK
21	86-ZM1-221-010		SPR-C, BT 2L	61	86-ZL1-214-010		SPR-P, CAS
22	86-ZM1-220-010		FELT, DIA 5.3-14-0.8	62	86-ZL1-211-010		ARM, CLAMP
23	87-046-399-110		HEAD, RPH YK56R-BS409	63	86-ZL1-206-010		GEAR, TRAY
24	82-ZM1-241-310		LVR, MC	64	86-ZL1-213-010		SPR-E, CLAMP
25	82-ZM1-242-010		LVR, CAS	65	86-ZL1-208-010		LEVER, SW
26	82-ZM1-243-010		LVR, STOP	66	86-ZL1-207-010		GEAR, PULLEY
27	86-ZM4-204-019		LVR ASSY, PINCH R3	67	86-ZL1-212-010		BELT, L
28	82-ZM1-259-110		SPR-T, PINCH R	68	86-ZL1-210-010		PULLEY, MOT
29	82-ZM1-240-110		LVR, REC	A	82-ZM1-315-010		S-SCREW GUIDE TAPE
30	82-ZM1-298-010		SPR-P EARTH	B	80-ZM6-207-010		V+1.6-7
31	82-ZM1-255-310		SPR-E, LVR DIR	C	82-ZM3-318-110		S-SCREW MOTOR M2
32	82-ZM1-221-110		GEAR, CAM	D	87-067-178-010		VTT+2.6-3
33	82-ZM1-227-210		LVR, TRIG	E	87-B10-008-010		W-P, 2.08-8-0.4 SLIT
34	82-ZM1-224-410		LVR, FR	F	82-ZM3-334-010		PW, 2.16-6-0.4
35	86-ZM4-201-010		SPR-E, TRIG 3	G	87-571-032-410		VIT+2-3
36	82-ZM1-239-010		CAPSTAN, 2.2-41.7	H	87-B10-043-010		W-P, 0.99-4-0.25 SLT
37	82-ZM1-223-010		GEAR, PLAY	I	83-ZG3-217-010		S-SCREW, GEAR D
38	82-ZM1-322-010		SPR-T, FR 60	J	87-251-072-410		U+2.6-5
39	82-ZM1-220-210		GEAR, IDLER	K	87-067-660-010		BVT2+3-8 W/O SLOT BLK
40	82-ZM1-316-010		RING, MAGNET 3				

SPRING APPLICATION POSITION

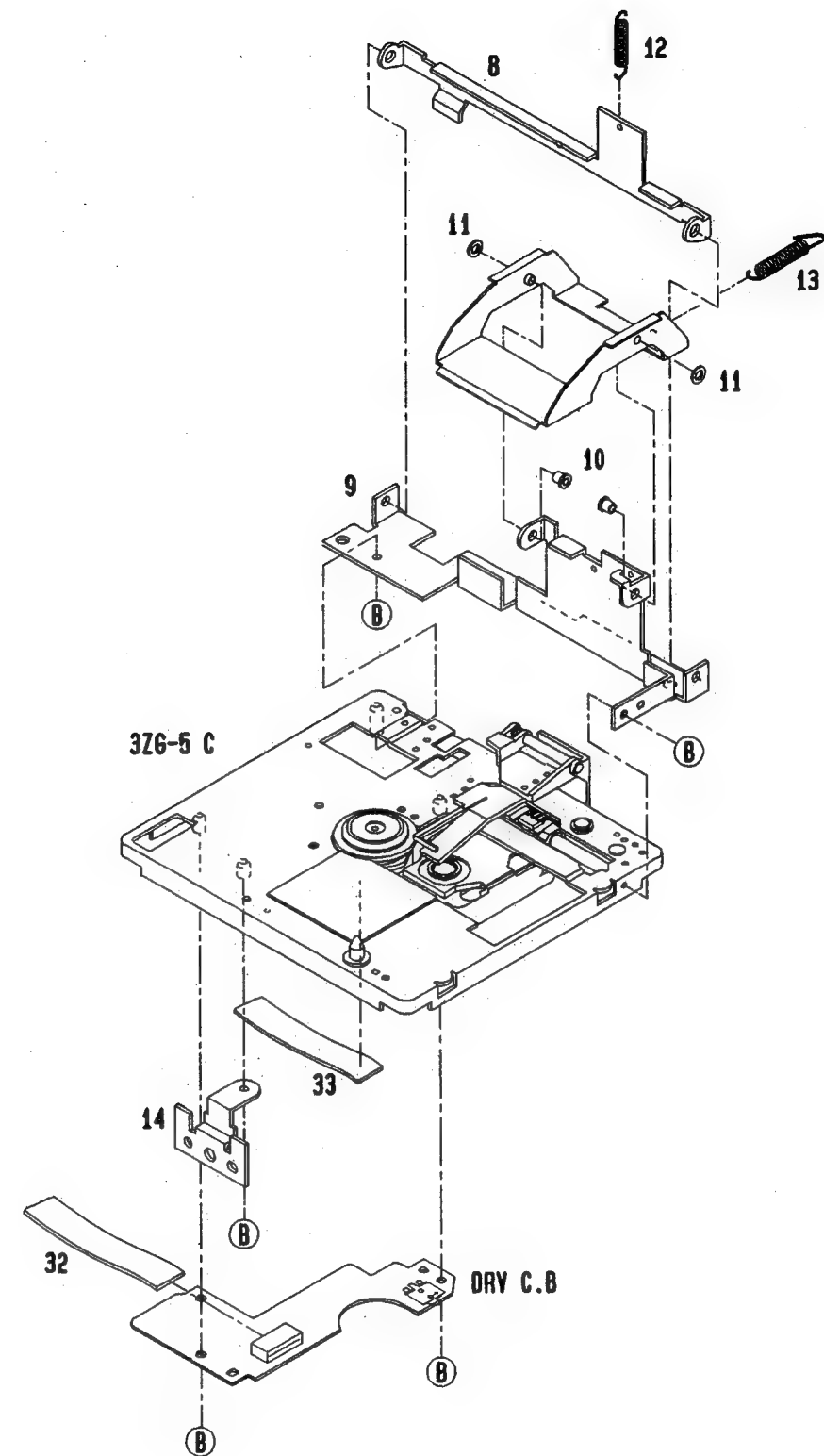
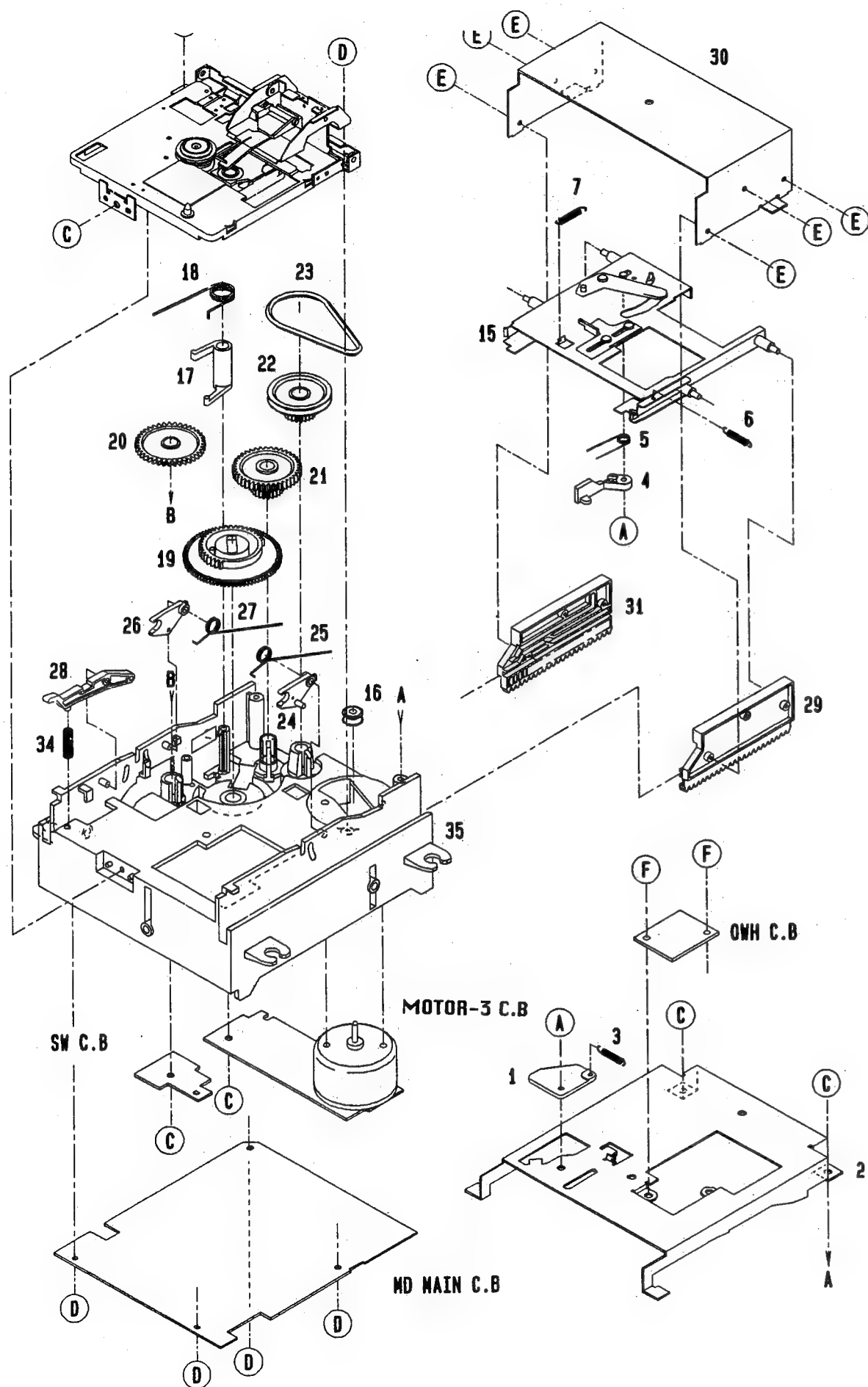


CD MECHANISM EXPLODED VIEW 1/2



If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

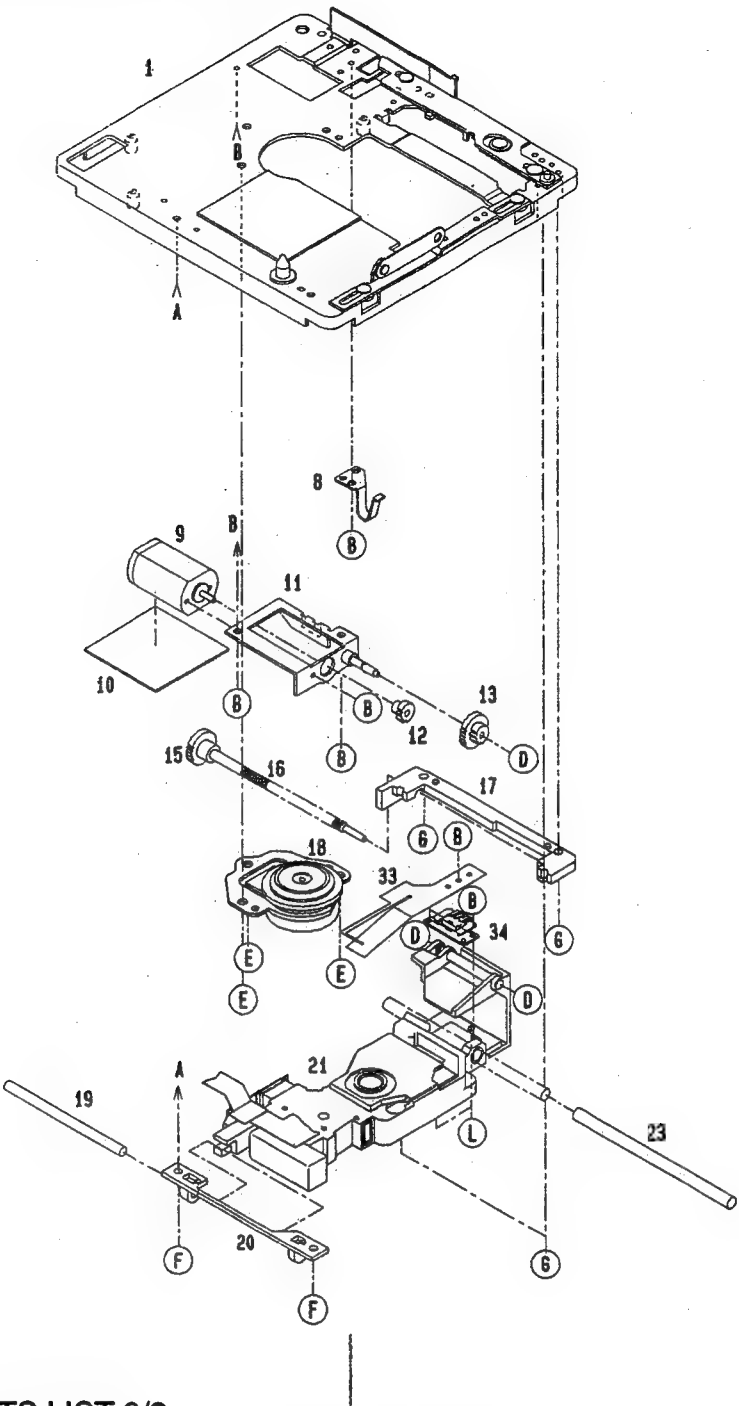
CD MECHANISM EXPLODED VIEW 2/2108



MD MECHANISM PARTS LIST 1/2

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZG2-226-010		GUIDE,EJECT	26	86-ZG2-207-010		LEVER,LOADING L
2	86-ZG2-250-010		HLDR ASSY,LOADING	27	86-ZG2-234-010		SPR-T,LVR LOADING L
3	86-ZG2-238-010		SPR-E,GUIDE EJECT	28	86-ZG2-224-010		LEVER,OPEN
4	86-ZG2-213-010		LEVER,CTRG	29	86-ZG2-206-010		RACK,LOADING R
5	86-ZG2-232-010		SPR-T,LVR CTRG	30	86-ZG2-223-010		HLDR,RACK
6	86-ZG2-233-010		SPR-E,PLATE LIMIT	31	86-ZG2-205-010		RACK,LOADING L
7	86-ZG2-260-010		SPR,E LEVER SHUTTER	32	86-ZG2-617-010		FF-CABLE,11P 0.5 125
8	86-ZG2-241-010		PLATE,REC	33	85-HM1-605-010		FF-CABLE,4P 2 11MM
9	86-ZG2-242-010		PLATE,MD R	34	86-ZG2-202-010		HLDR ASSY,CTRG
10	86-ZG2-258-010		SHAFT 1.8-1.4	35	86-ZG2-236-010		SPR-C,LVR OPEN
11	86-ZG2-259-010		WP,1.5-4-0.3 BSU WO ADH	A	86-ZG2-253-010		W-P,1.7-6-0.3 B W/O
12	86-ZG2-243-010		SPR-E,PLATE HEAD	B	87-067-359-010		S-SCRW,+1.4-2.5(BLK)
13	86-ZG2-244-010		SPR-E,PLATE REC	C	87-067-659-010		BVT2+2.6-8W/O SLOT B
14	86-ZG2-231-010		HLDR,MD F	D	87-342-036-210		UT2+2-8
15	86-ZG2-201-010		CHAS,LOADING	E	87-B10-024-310		VT2+1.7-6 W/O
16	81-ZG1-212-010		PULLY,LOAD MO	F	87-351-530-310		VT2+1,7-45
17	86-ZG2-225-010		LEVER,LOCK				
18	86-ZG2-237-010		SPR-T,LVR LOCK				
19	86-ZG2-229-010		GEAR,ASSIST				
20	86-ZG2-230-010		GEAR,IDLE H				
21	86-ZG2-228-010		GEAR,RELAY				
22	86-ZG2-227-010		PULLEY,LOADING				
23	86-ZG2-247-010		BELT,LOADING				
24	86-ZG2-208-010		LEVER,LOADING R				
25	86-ZG2-235-010		SPR-T,LVR LOADING R				

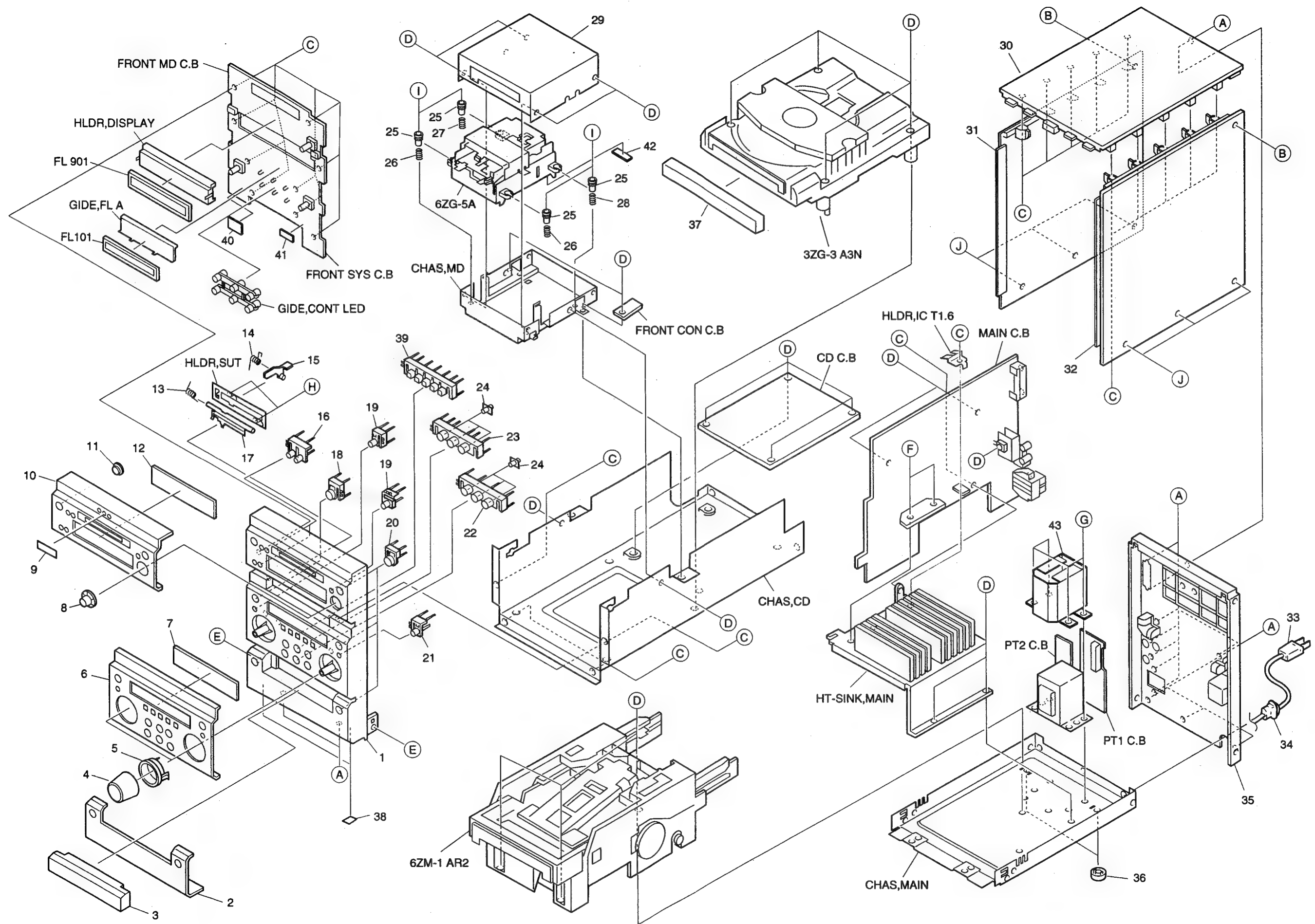


MD MECHANISM EXPLODED VIEW 2/2

MD MECHANISM PARTS LIST 2/2

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG5-290-010		CHAS,C ASSY	33	87-046-415-010		HEAD,RF320-74H
8	83-ZG5-265-010		SPR-P,GEAR P.U.	34	83-ZG5-247-110		SPR-P,INSERT ASSY
9	87-045-374-010		MOT,FFM20VK-7Z170	B	87-261-500-310		V+1.4-1.4 BLK(1)
10	83-ZG5-277-010		SH,20-12-0.05	D	87-078-123-010		PW,1.1-2.5-0.3 C
11	83-ZG5-261-010		HLDR,MOTOR P.U.ASSY	E	87-262-521-310		V+1.7-1.6 BLK
12	83-ZG5-268-010		GEAR,MOTOR P.U.	F	87-262-505-310		V+1.4-2.5 BLK(3)
13	83-ZG5-267-010		GEAR,P.U.B	G	87-262-507-310		V+1.4-3.0 BLK
15	83-ZG5-266-010		GEAR,P.U.A	L	87-262-523-310		V+1.7-2 BLK(3)
16	83-ZG5-254-110		SHAFT,PU GUIDE C				
17	83-ZG5-253-110		HLDR,PU GUIDE B				
18	87-045-373-110		MOT,SPINDOL				
19	83-ZG5-250-010		SHAFT,P.U.GUIDE A				
20	83-ZG5-252-110		HLDR,PU GUIDE A				
21	83-ZG5-297-010		PICK UP ASSY,2				
23	83-ZG5-251-010		SHAFT,P.U.GUIDE B				



MECHANICAL PARTS LIST 1/1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-CE1-001-010		CABI, FR	31	87-CE1-025-010		PANEL, SIDE R
2	87-CE1-006-010		PANEL, C	32	87-CE1-024-010		PANEL, SIDE L
3	87-CV2-008-010		PANEL, CASS	33	87-050-079-010		AC CORD ASSY, E BLK<EZ>
4	87-CE1-017-110		KNOB, RTRY VOL	33	87-050-053-010		AC CORD ASSY, U-2<U>
5	87-CE1-019-010		RING, VOL	34	87-085-185-010		BUSHING, AC CORD(E) CM-22B<EZ>
6	87-CE1-005-010		PANEL, B	34	87-085-189-010		BUSHING, AC CORD(U) CM-22C<U>
7	87-CE1-010-210		WINDOW, CENTER	35	87-CE1-033-010		PANEL, REAR EZ<EZ>
8	87-CC1-015-010		KNOB, RTRY DIAL	35	87-CE1-031-010		PANEL, REAR U<U>
9	87-CU2-009-010		BADGE, AIWA 30(S) 30	36	81-669-025-010		FOOT, H11
10	87-CE1-004-010		PANEL, A	37	87-CE1-007-010		PANEL, CD
11	87-CE1-020-010		LENS, SENSOR	38	80-VT1-202-010		FELT, 12.5-15.5-2
12	87-CE1-009-210		WINDOW, MD	39	87-CE1-023-010		BTN, FUNC ASSY
13	85-NC1-210-110		SPR-T, PANEL	40	87-CE1-209-010		PLATE, DISPLAY
14	85-NC1-209-010		SPR-T, LVR	41	87-CE1-211-010		PLATE, DISPLAY A
15	85-NC1-205-210		LEVER, OPEN	42	87-CE1-214-010		FELT, 10-40
16	87-CE1-011-010		BTN, MD	43	87-CE1-605-010		SHLD-PLATE, PT
17	87-CC1-010-010		PANEL, DISC	A	87-067-761-010		BVT2+3-10 BLK
18	87-CC1-012-010		KEY, POWER	B	87-744-095-410		UT2+3-8 W/O SLOT CR
19	87-CE1-015-010		BTN, MODE	C	87-067-703-010		BVT2+3-10 W/O SLOT
20	87-CC1-013-010		KEY, EJECT	D	87-067-584-010		BVT2+3-6 W/O SLOT
21	87-CE1-016-010		BTN, DEMO	E	87-723-095-410		QT2+3-8 W/O SLOT BLK
22	87-CE1-014-010		BTN, CONT B	F	87-067-581-010		BVT2+3-15 W/O SLOT
23	87-CE1-013-010		BTN, CONT A	G	87-067-585-010		BVT+4-6
24	87-CE1-021-010		LENS, CONT	H	87-651-074-410		VT1+2.6-8
25	85-NC1-207-010		DMPR, MECHA	I	85-NC1-211-010		S-SCREW, MECHA
26	85-NC1-208-110		SPR-C, MECHA F	J	87-B10-068-010		UTT2+3-6 W/O SLOT CR
27	85-NC1-213-110		SPR-C, MECHA L				
28	85-NC1-212-110		SPR-C, MECHA R				
29	87-CE1-204-110		COVER, MD				
30	87-CE1-002-010		PANEL, TOP				

ACCESSORIES / PACKAGE LIST

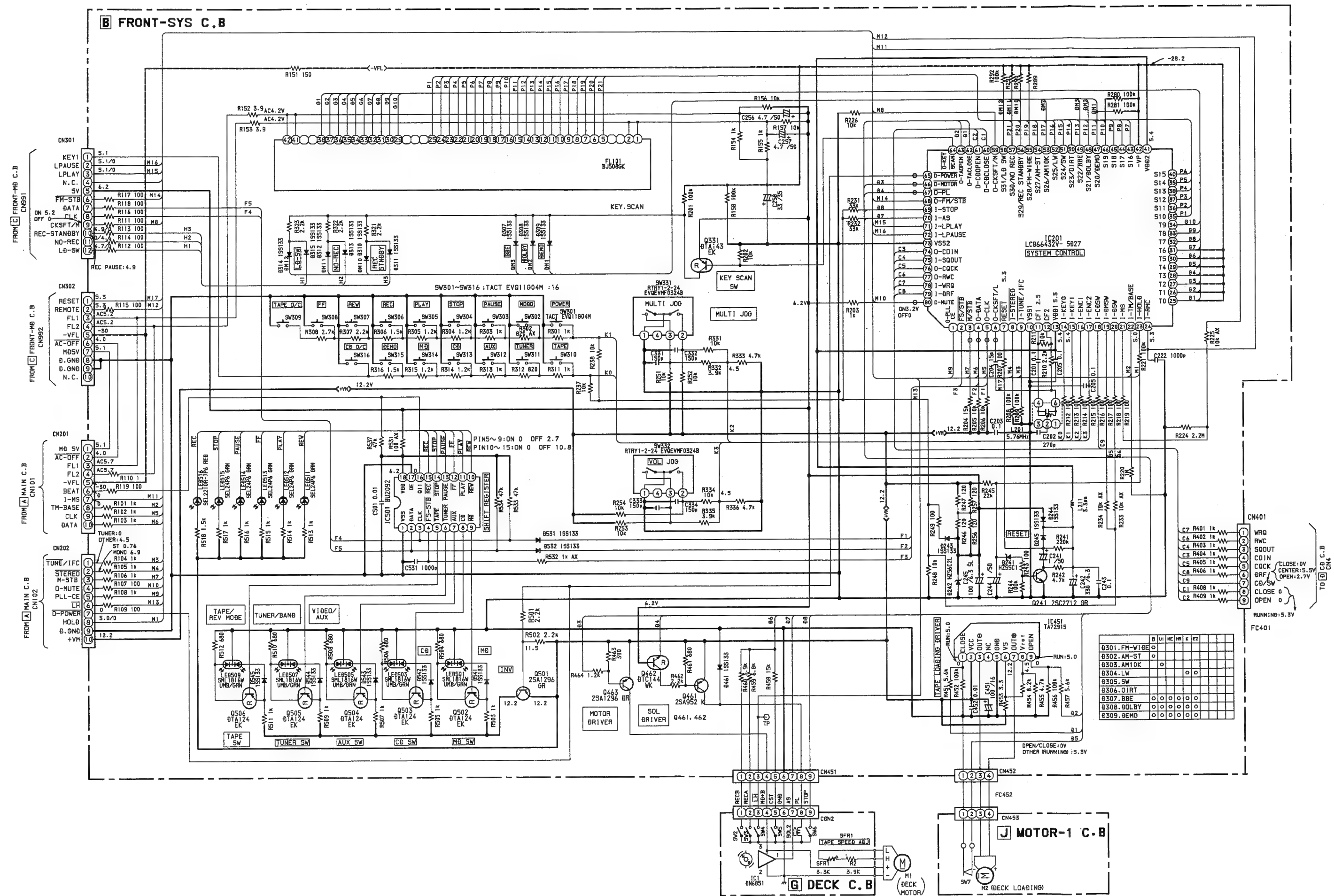
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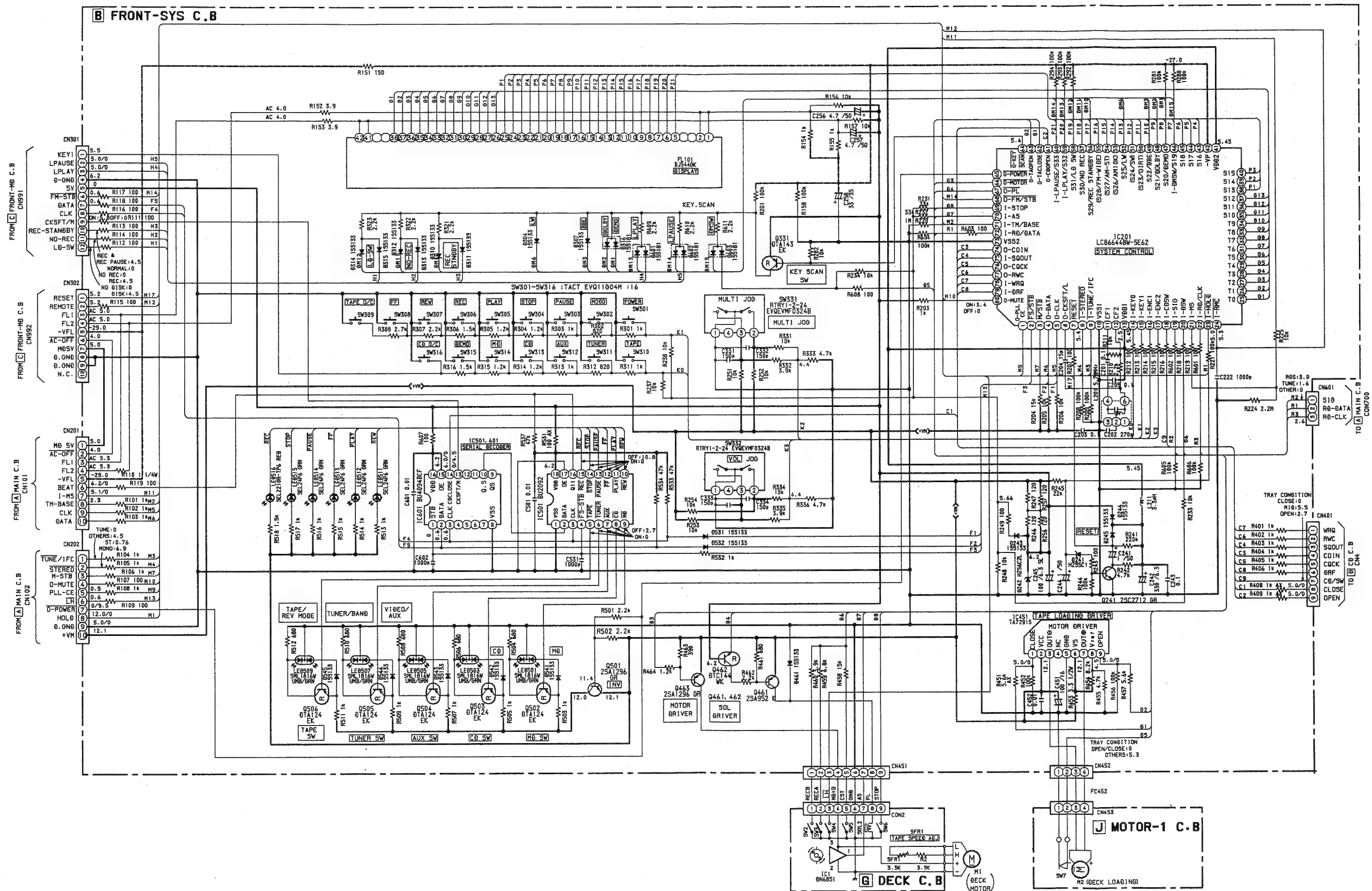
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1	87-CE1-905-010		IB, U(ESF) I<U>
1	87-CE1-907-010		IB, E(EGFSI) I<EZ>
2	87-CL1-951-010		RC, UNIT, RC-6AS19
3	87-006-225-010		ANT, LOOP ANT NC2
4	87-A90-064-010		FEEDER-ANT, FM(SHS)

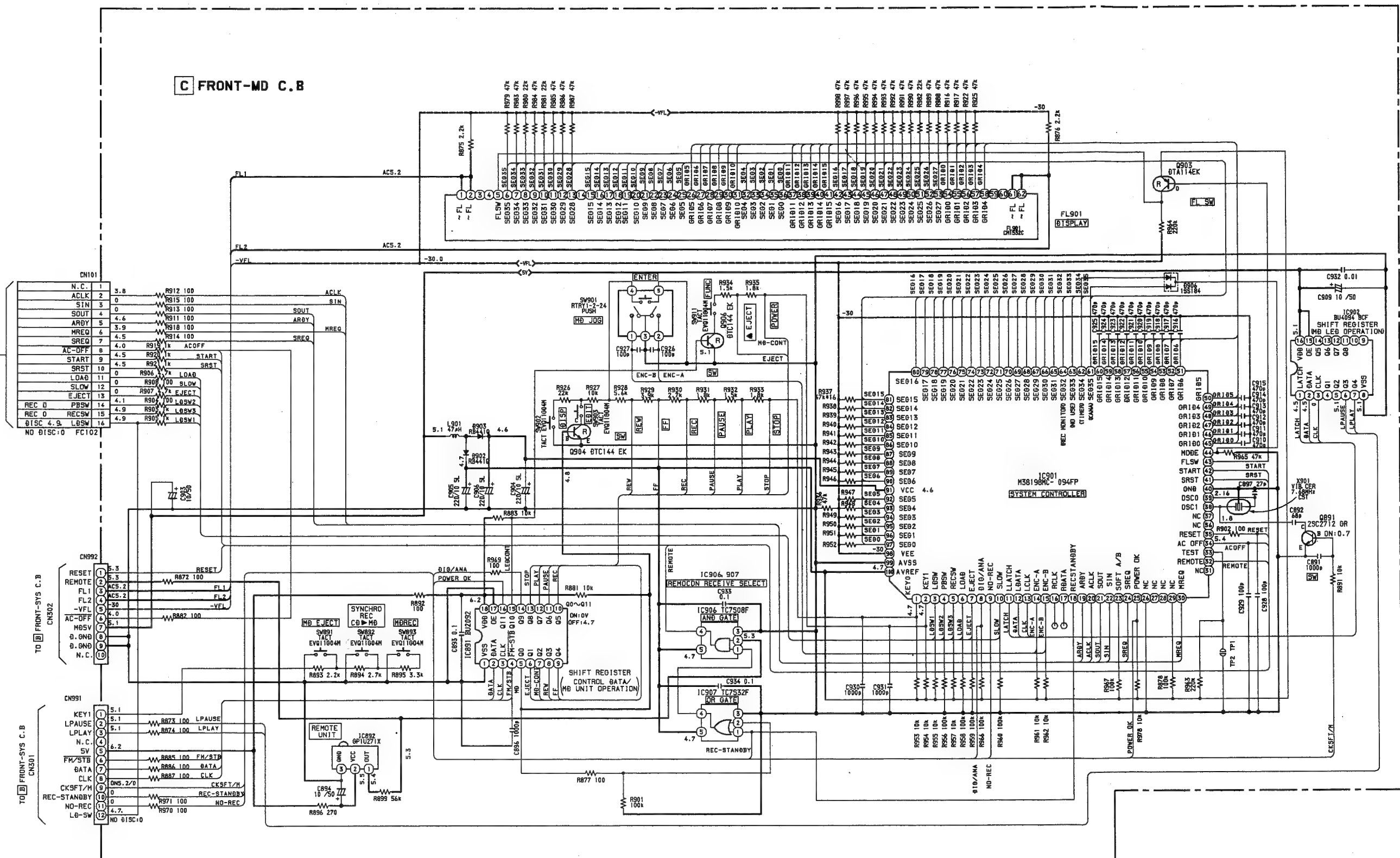
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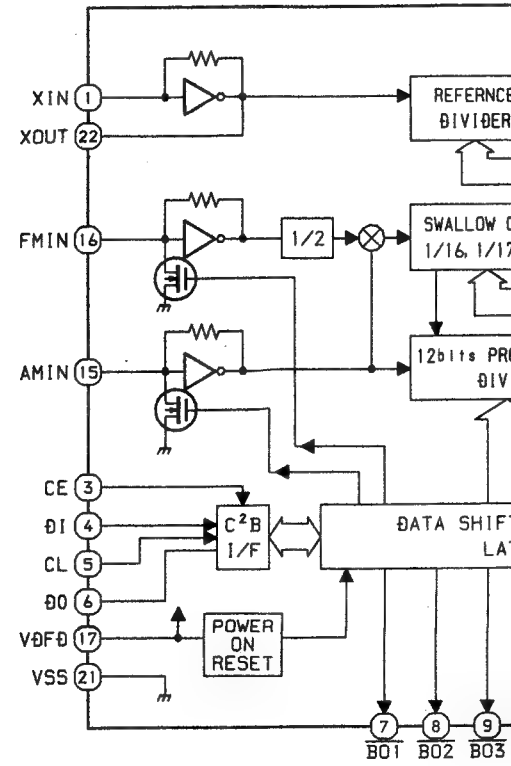
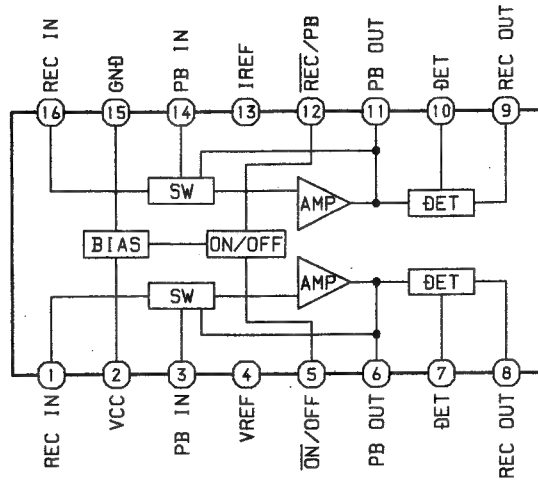
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-CP1-001-010		PANEL, FR
2	87-CP1-004-010		GRILLE, FRAME ASSY
3	86-CP1-610-010		TERMINAL, ASSY
4	86-CP1-602-010		SPKR, W 13 6OHM
5	86-CP1-604-010		SPKR, T 6 6OHM
6	83-096-614-010		SPEAKER CODE
7	87-CP1-003-010		PANEL, TW

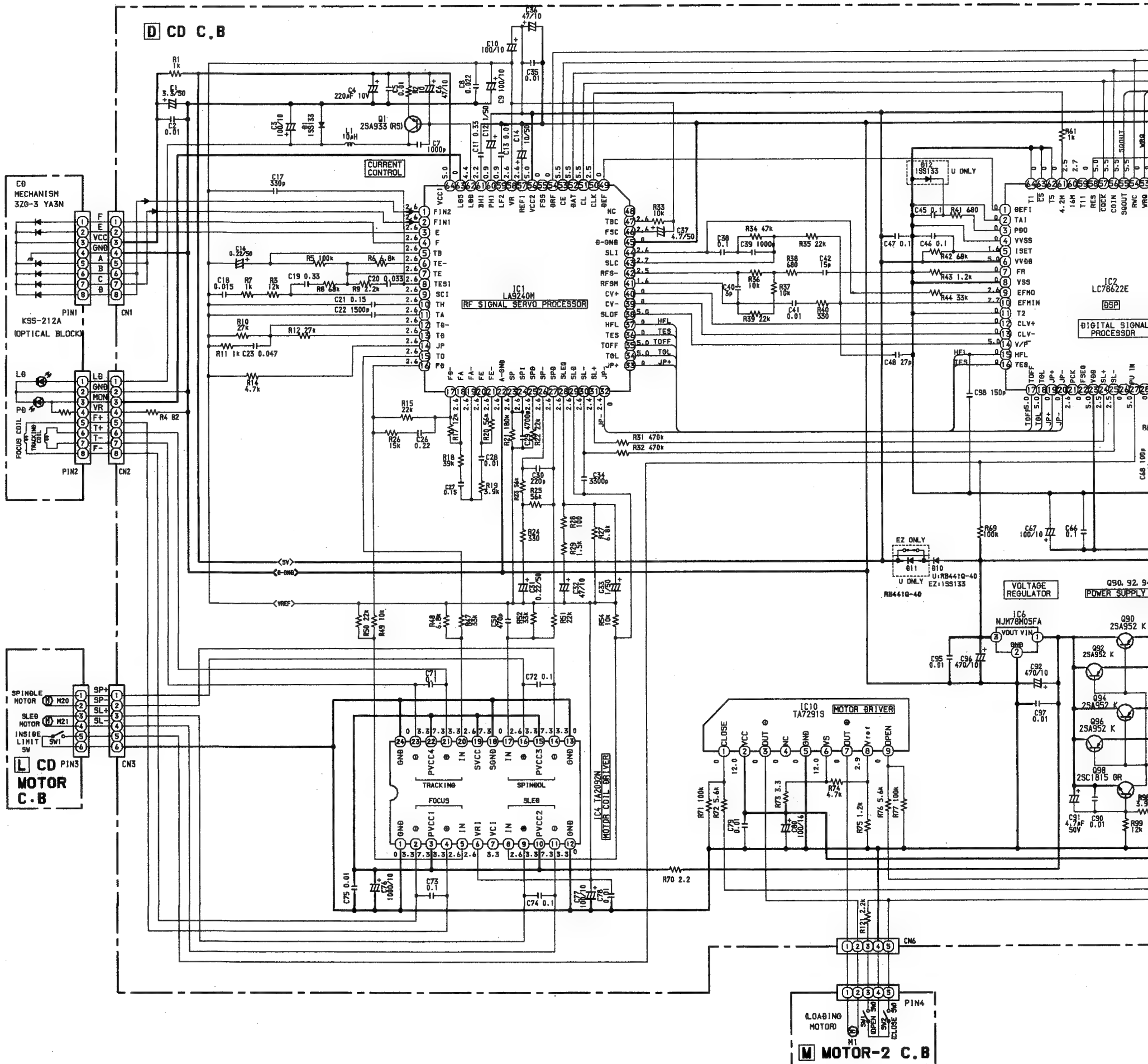




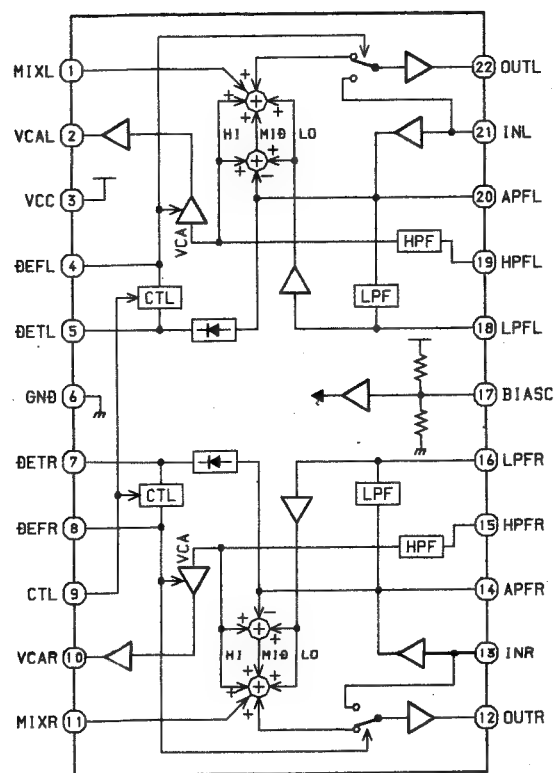
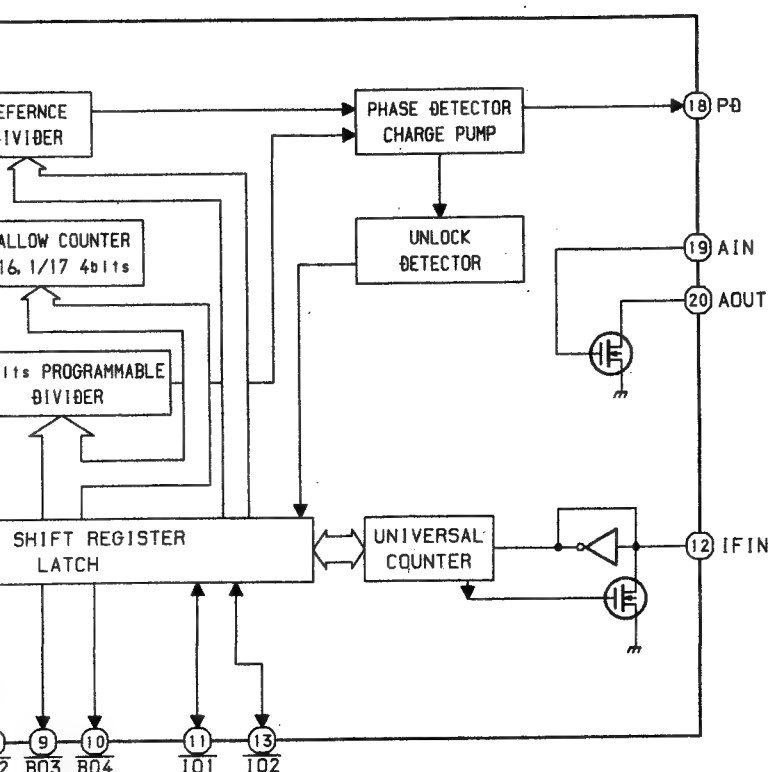




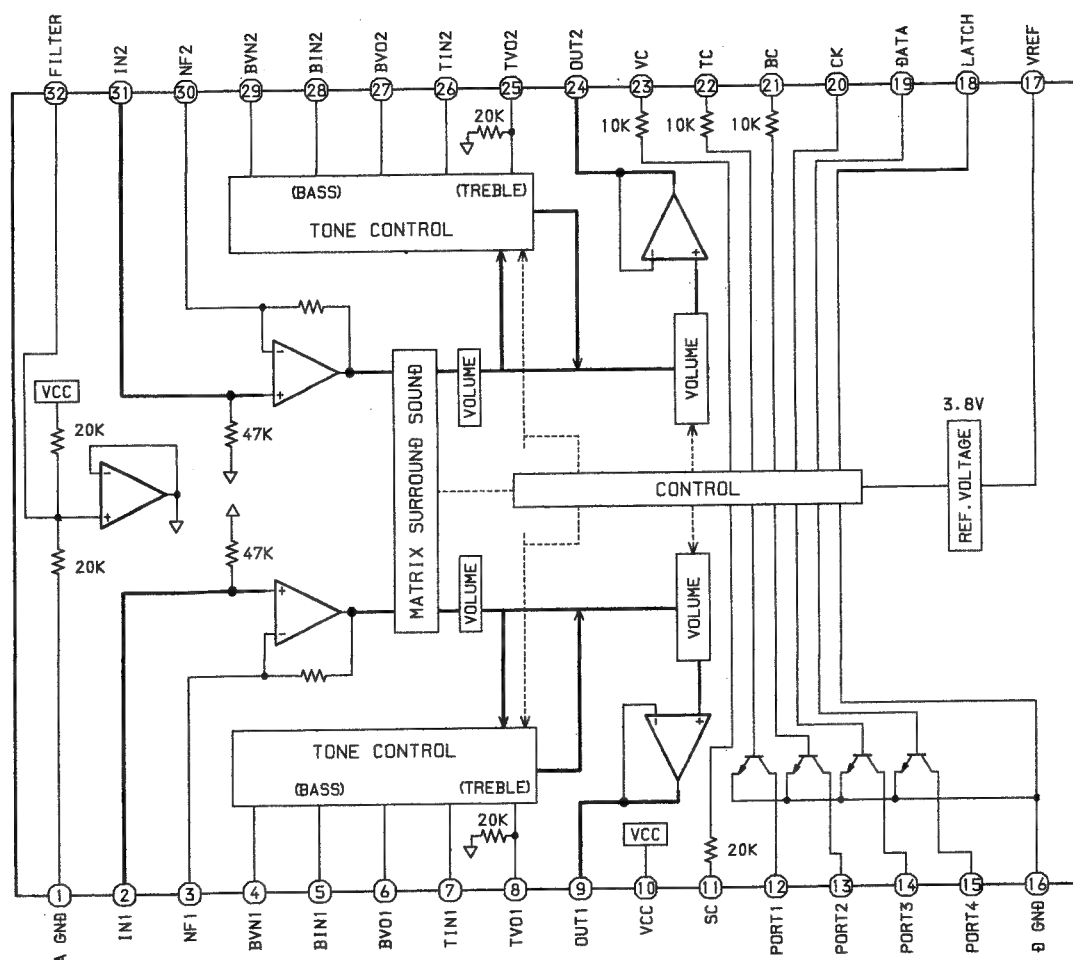
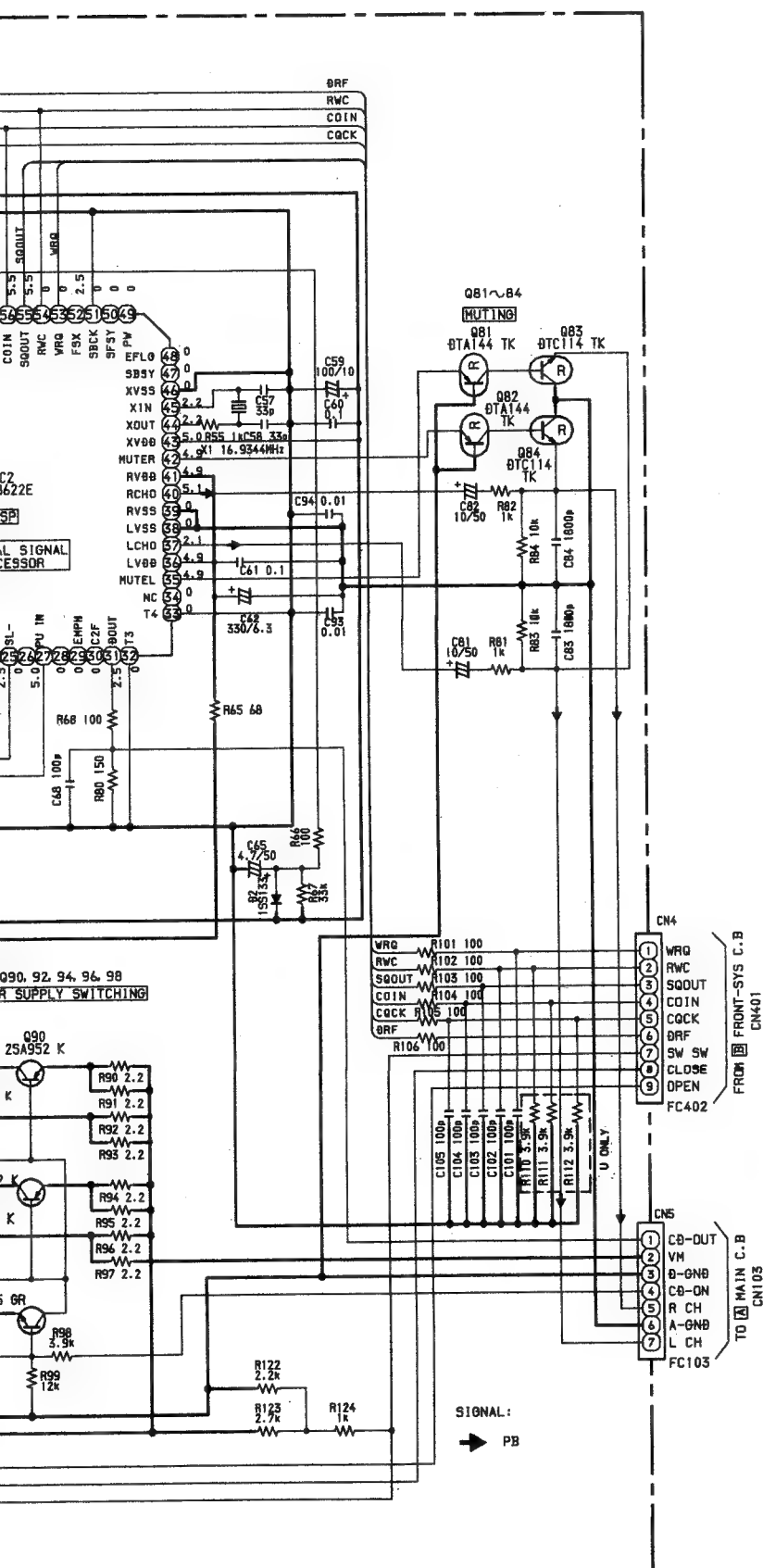
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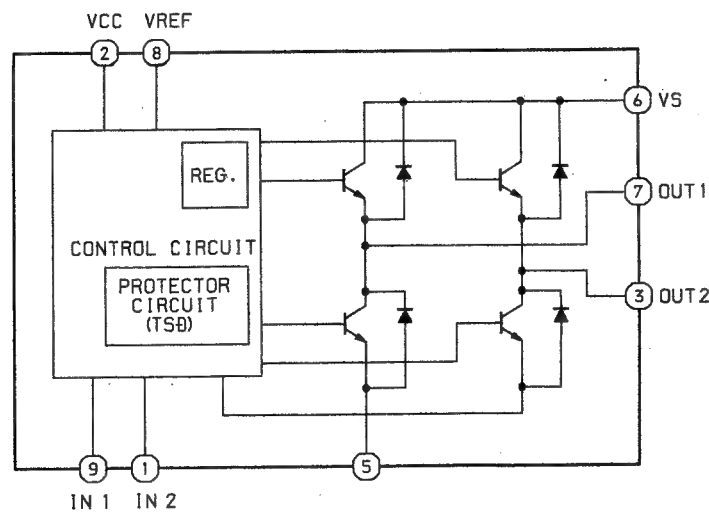
IC, BA3880S



IC, BH3854S

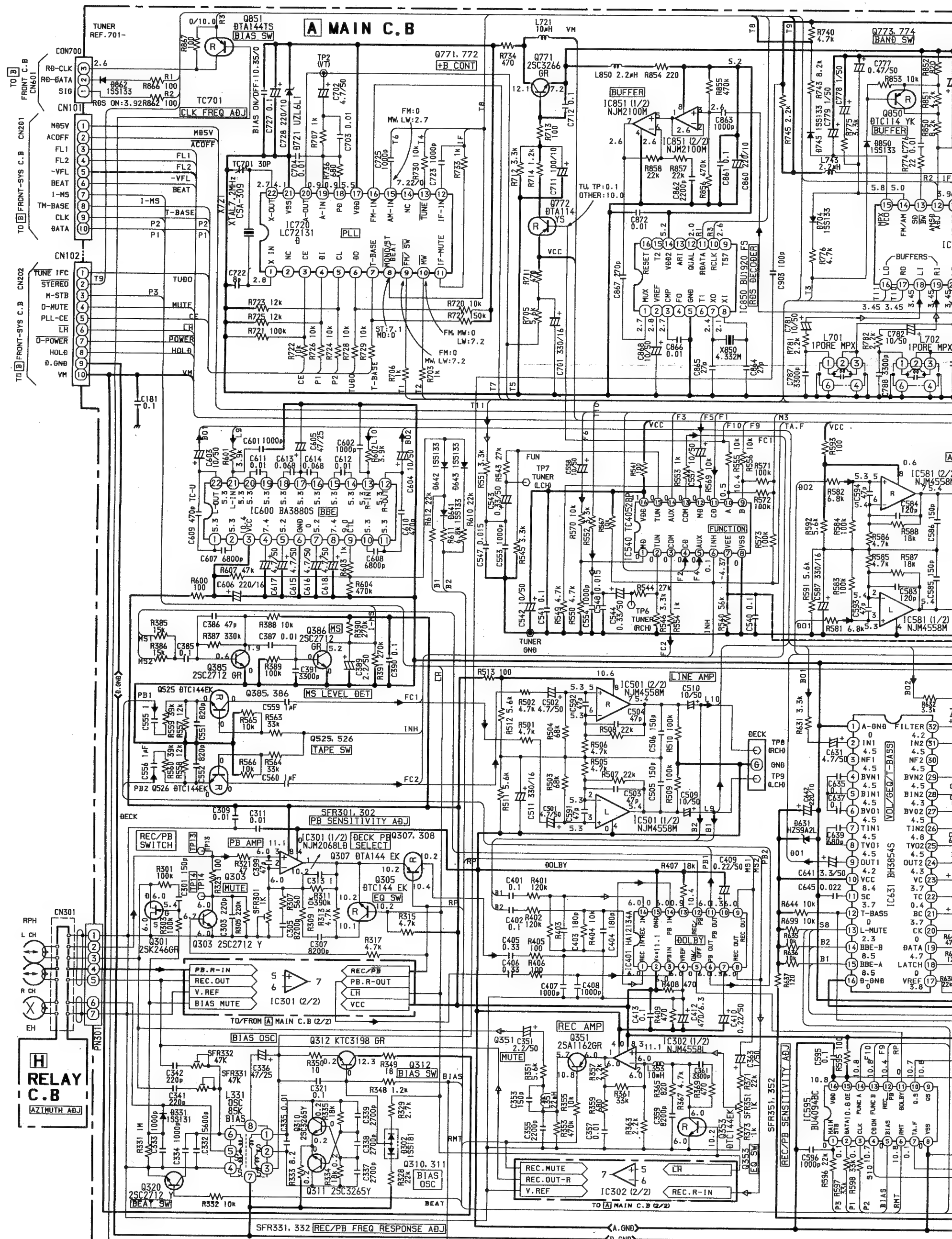


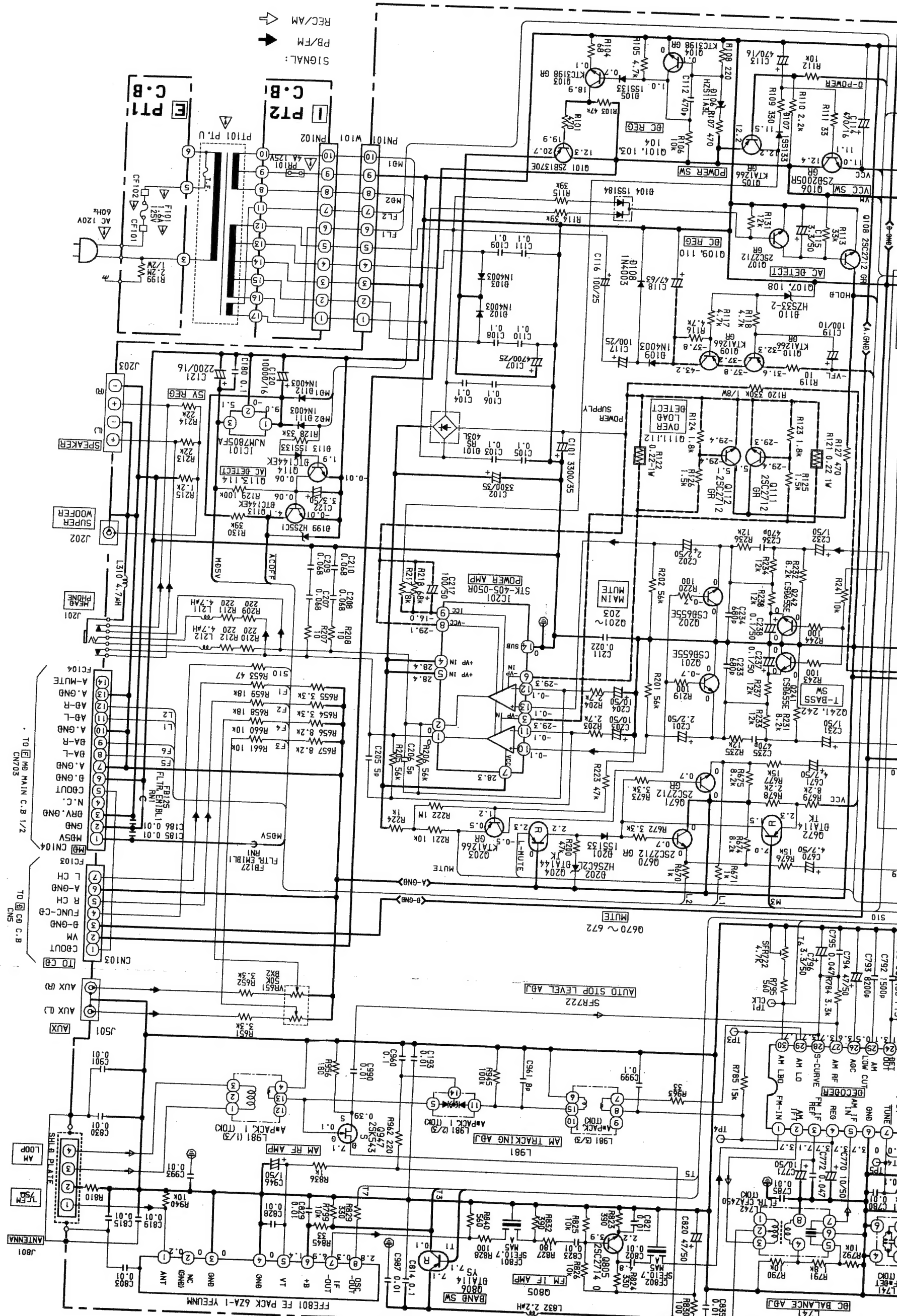
IC, TA7291S



INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW
0	1	L	H	CCW
1	1	L	L	BRAKE

∞ : HI IMPEDANCE
NOTE : INPUT "H" ACTIVE





MD MECHANISM PARTS LIST 1/2

RIGHTEOUS

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
15	86-ZG2-202-010	2A	HLDR ASSY,CTRG
34	86-ZG2-236-010	0E	SPR-C,LVR OPEN
35	86-ZG2-201-010	1D	CHAS,LOADING

MISTAKE

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
15	86-ZG2-201-010	1D	CHAS,LOADING
34	86-ZG2-202-010	2A	HLDR ASSY,CTRG
35	86-ZG2-236-010	0E	SPR-C,LVR OPEN

サービス技術ニュース	
番号	連絡内容
G- -	
G- -	
G- -	

アイワ株式会社
AIWA CO.,LTD.

750038

Tokyo Japan

aiwa

245-



AM-X1
AM-H30
XR-MD50
XR-MD60
CSD-MD1

MANUAL
SERVICE

• BASIC MD MECHANISM: 6ZG-2 B, 6ZG-5 A

• TYPE: D,EZ,U

CORRECTION

MODEL NAME	TYPE	MECHANISM	S/M Code No.
A M - X 1	D	6ZG-2 B	09-969-144-40T
A M - H 3 0	E Z	6ZG-5 A	09-975-177-9FP
X R - M D 5 0	D	6ZG-5 A	09-96C-173-4FP
X R - M D 5 0	U, EZ	6ZG-5 A	09-974-178-9FP
X R - M D 6 0	D	6ZG-5 A	09-971-165-3FP
C S D - M D 1	D	6ZG-5 A	09-972-156-8FE